


TC-WA9ES

SERVICE MANUAL

US Model
Canadian Model
E Model
Australian Model



Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen. "DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	TCM-200R12

SPECIFICATIONS

System

Recording system

4-track 2-channel stereo

Fast-winding time (approx.)

90 sec. (with Sony C-60 cassette)

Bias

AC bias

Signal-to-noise ratio (at peak level, weighted, and with Dolby NR off)

Type I tape, Sony Type I (NORMAL): 56 dB

Type II tape, Sony Type II (HIGH): 58 dB

Type IV tape, Sony Type IV (METAL): 59 dB

S/N ratio improvement (approximate values)

With Dolby B NR on: 5 dB at 1 kHz, 10 dB at 5 kHz

With Dolby C NR on: 15 dB at 500 Hz, 20 dB at 1 kHz

With Dolby S NR on: 10 dB at 100 Hz, 24 dB at 1 kHz

Harmonic distortion

0.4 % (with Type I tape, Sony Type I (NORMAL):

160 nWb/m 315 Hz, 3rd H.D.)

1.8 % (with Type IV tape, Sony Type IV (METAL):

250 nWb/m 315 Hz, 3rd H.D.)

Frequency response (Dolby NR off)

Type I tape, Sony Type I (NORMAL): 25 - 16,000 Hz

(± 3 dB, IEC)

Type II tape, Sony Type II (HIGH): 25 - 18,000 Hz

(± 3 dB, IEC)

Type IV tape, Sony Type IV (METAL): 25 - 20,000 Hz

(US, Canadian model),

25 - 19,000 Hz (E, Australian model)

(± 3 dB, IEC)

30 - 15,000 Hz (± 3 dB, -4 dB recording)

Wow and flutter

$\pm 0.09\%$ W. Peak (IEC)

0.06% W. RMS (NAB)

$\pm 0.16\%$ W. Peak (DIN)

Variable pitch range (approx.)

-30 to +30%

Inputs

Line inputs (phono jacks)

Sensitivity: 0.16 V

Input impedance: 47 kilohms

Outputs

Line outputs (phono jacks)

Rated output level: 0.5 V at a load impedance of

47 kilohms

Load impedance: Over 10 kilohms

Headphones (stereo phone jack)

Output level: 0 to 3 mW at a load impedance of

32 ohms

General

Power requirements

US, Canadian model 120 V AC, 60 Hz

Australian model 240 V AC, 50/60 Hz

E model 120/220/240 V AC, 50/60 Hz.

Power consumption

30 W

Dimensions (approx) (w/h/d)

430 x 135 x 350 mm (w/h/d)

(17 x 5 3/4 x 13 7/8 inches)

including projecting parts and controls

Mass (approx.)

6.5 kg (14 lbs 6 oz)

Supplied accessories

Audio connecting cords (2 phono plugs - 2 phono

plugs) (2)

Remote commander RM-J903 (1)*

Sony size AA (R6) batteries (2)*

* not supplied with the US, Canadian models

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK
SONY[®]

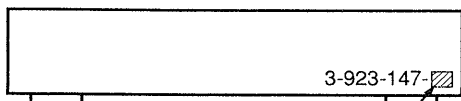


TABLE OF CONTENTS

Section	Title	Page
SECTION 1. GENERAL	3
SECTION 2. DISASSEMBLY		
2-1.	Case and Front Panel	4
2-2.	Mechanism Deck Block	4
2-3-1.	Cassette Holder	5
2-3-2.	Ornamental Plate	5
2-3-3.	Pinch Lever, Head	6
2-3-4.	Capstan Motor, Fly Wheel	6
2-3-5.	Reel and Assist Motors	7
SECTION 3. ADJUSTMENT		
3-1.	Mechanism Adjustment	8
3-2.	Electrical Adjustment	8
	Record/Playback Head Azimuth Adjustment	
	Deck A Deck B	9
	Tape Speed Adjustment Deck A Deck B	9
	Playback Level Adjustment Deck A Deck B	10
	Pitch Control Speed Adjustment	10
	Bias Current Adjustment	10
	Record Bias Adjustment Deck A Deck B	10
	Record Level Adjustment Deck A Deck B	10
	Quick Reverse Sensitivity Adjustment Deck A Deck B	11
	Record EQ (Type IV) Adjustment Deck A Deck B	11
SECTION 4. DIAGRAMS		
4-1.	Circuit Boards Location	12
4-2.	IC Pin Functions	
	• IC801 System Controller (uPD78043AGF-023-3B9)	13
	• IC802 Mechanism Controller (M38002M2-185FP)	15
	• IC901 Display Controller (M38122M2-103FP)	17
4-3.	Block Diagram	18
4-4.	Printed Wiring Board — Main, Panel, Deck Block —	21
4-5.	Schematic Diagram — Main (1/2), Panel Block —	
	(Audio)	25
4-6.	Schematic Diagram — Main (2/2), Panel, Deck Block —	
	(System Control)	30
4-7.	Printed Wiring Board — Panel Block —	35
4-8.	Schematic Diagram — Dolby S Block —	39
4-9.	Printed Wiring Board — Dolby S Block —	40
SECTION 5. EXPLODED VIEWS		
5-1.	Case Section	41
5-2.	Front Panel Section	42
5-3.	Chassis Section	43
5-4.	Mechanism Deck Section 1 (TCM-200R12)	44
5-5.	Mechanism Deck Section 2 (TCM-200R12)	45
SECTION 6. ELECTRICAL PARTS LIST	46

MODEL IDENTIFICATION

— BACK PANEL —



US, Canadian Model : 0□ (U/CA)
 E Model : 1□ (E2/E3)
 Australian Model : 2□ (AU)

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

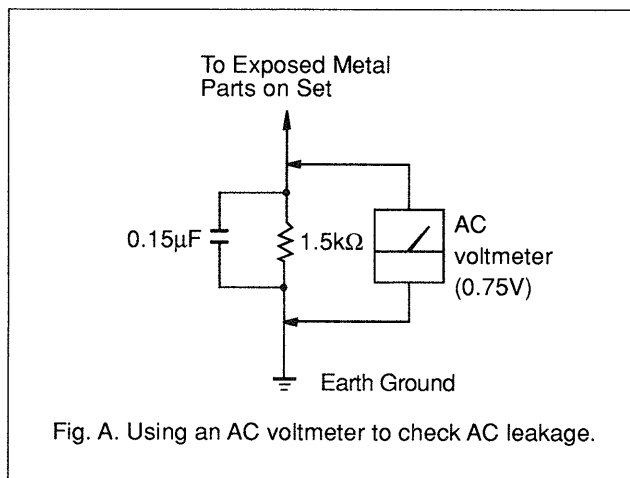


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

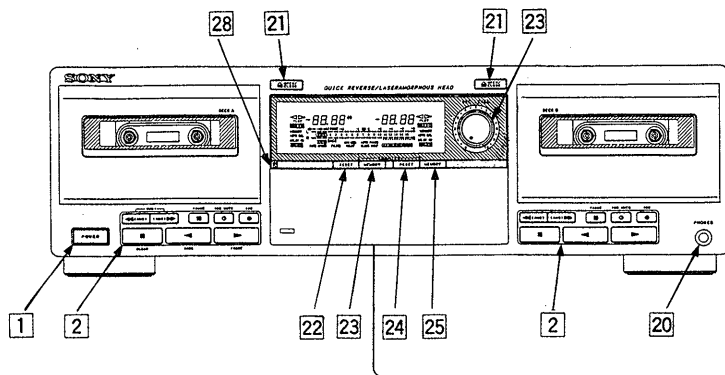
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE Δ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

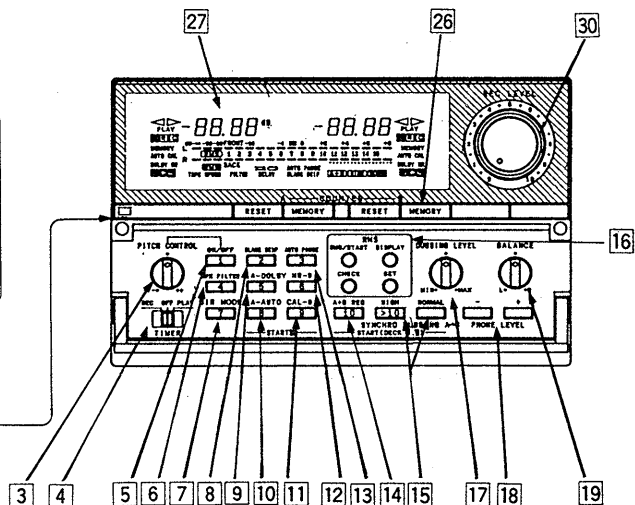
SECTION 1 GENERAL

LOCATION OF CONTROL

Front Panel



Inside of Sealing Panel (Keeping Section of Controls, switches, etc.)



- | | |
|---|---|
| <p>1 POWER switch</p> <p>2 Tape operation buttons</p> <ul style="list-style-type: none"> ■ (stop/RMS CLEAR) button ◀ (reverse play/RMS BACK) button ▶ (forward play/RMS FRONT) button ◀◀ (fast-forwarding/AMS*/RMS**+) button ▶▶ (rewinding/AMS*/RMS**-) button PAUSE button ■ REC MUTE (record muting) button ● REC (recording) button <p>3 1/PITCH CONTROL (Tape speed)</p> <p>4 4/TIMER switch</p> <p>5 7/PITCH CONTROL ON/OFF (Tape speed) button</p> <p>6 2/MPX (multiplex) FILTER ON/OFF button</p> <p>7 5/DIR (direction) MODE switch</p> <p>8 BLANK SKIP button</p> <p>9 DOLBY NR (Dolby noise reduction) buttons (deck A)</p> <ul style="list-style-type: none"> ON/OFF button B/C/S button <p>10 8/AUTO CAL button (deck A)</p> <p>11 9/AUTO CAL button (deck B)</p> <p>12 6/DOLBY NR (Dolby noise reduction) buttons (deck B)</p> <ul style="list-style-type: none"> ON/OFF buttons B/C/S buttons | <p>13 AUTO PAUSE button</p> <p>14 A+B REC (simultaneous recording) button</p> <p>15 SYNCHRO DUBBING buttons</p> <ul style="list-style-type: none"> HIGH Speed button NORMAL Speed button <p>16 RMS** buttons</p> <ul style="list-style-type: none"> RMS/START button DISPLAY button CHECK button SET button <p>17 DUBBING LEVEL control</p> <p>18 PHONE LEVEL +/- buttons</p> <p>19 BALANCE control</p> <p>20 PHONES (headphones) jack (stereo phone jack)</p> <p>21 ▲ OPEN/CLOSE button</p> <p>22 COUNTER RESET (deck A)</p> <p>23 COUNTER MEMORY (deck A)</p> <p>24 COUNTER RESET (deck B)</p> <p>25 COUNTER MEMORY (deck B)</p> <p>27 Display panel and Indicator tube</p> <p>28 Remote control sensor</p> <p>30 REC (recording) LEVEL control</p> |
|---|---|

* AMS is an abbreviation for Automatic Music Sensor.

** RMS is an abbreviation for Random Music Sensor. (deck B only)

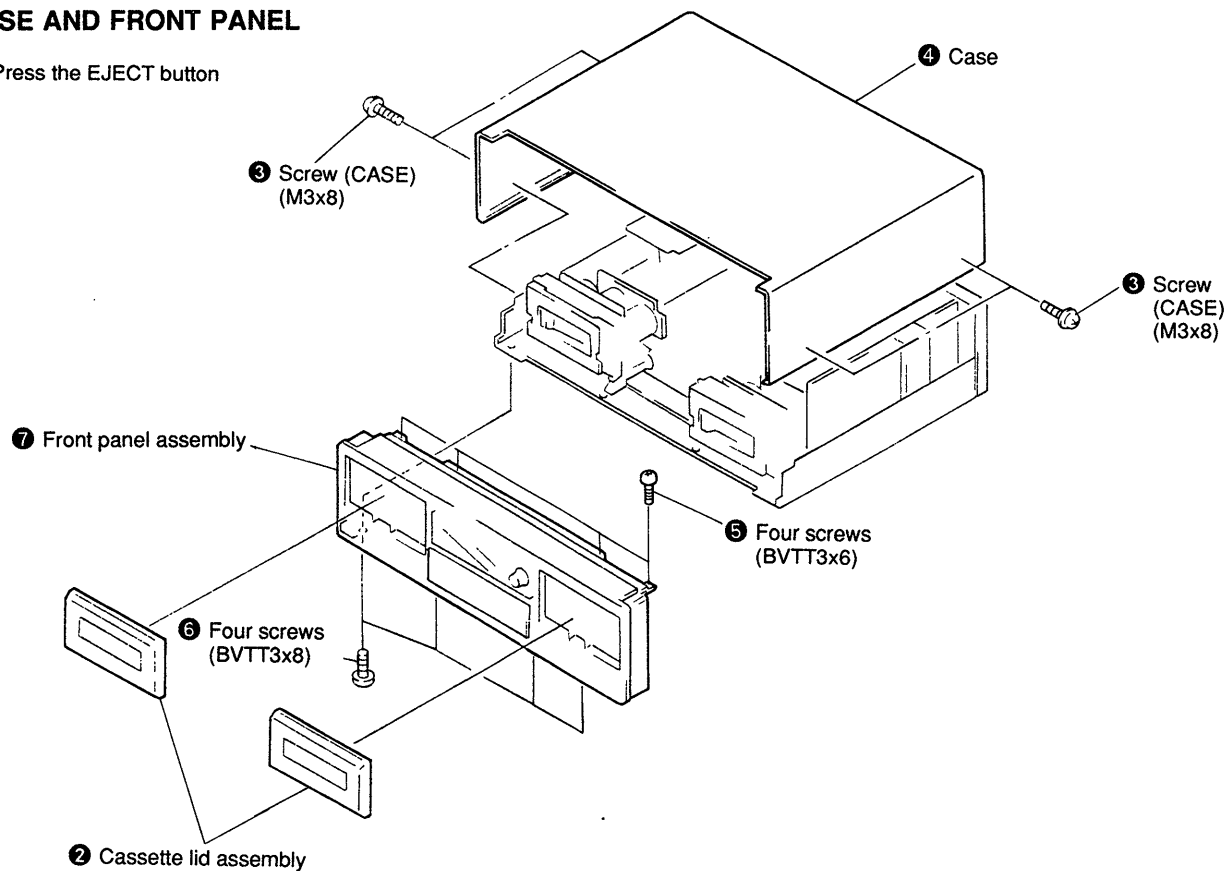
SECTION 2

DISASSEMBLY

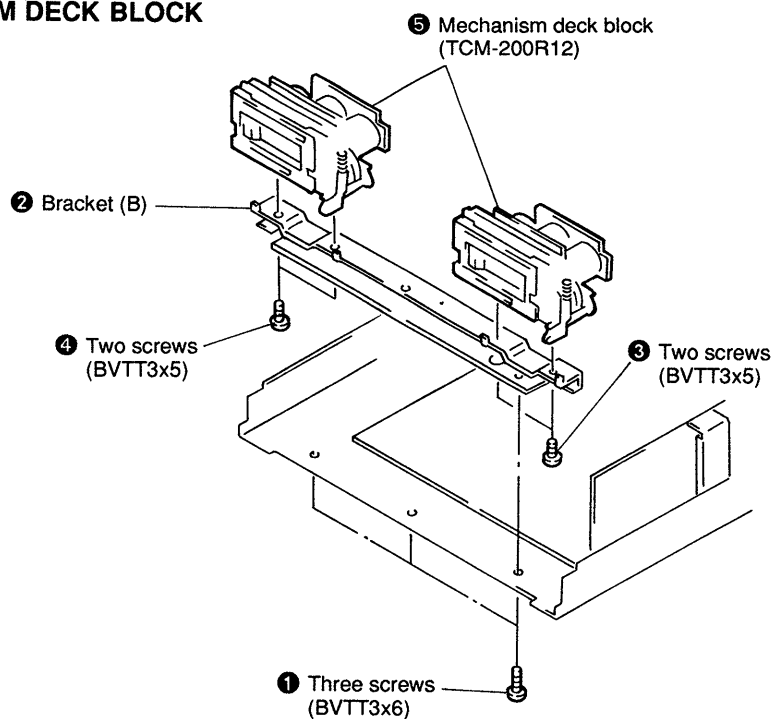
Note : Follow the disassembly procedure in the numerical order given.

2-1. CASE AND FRONT PANEL

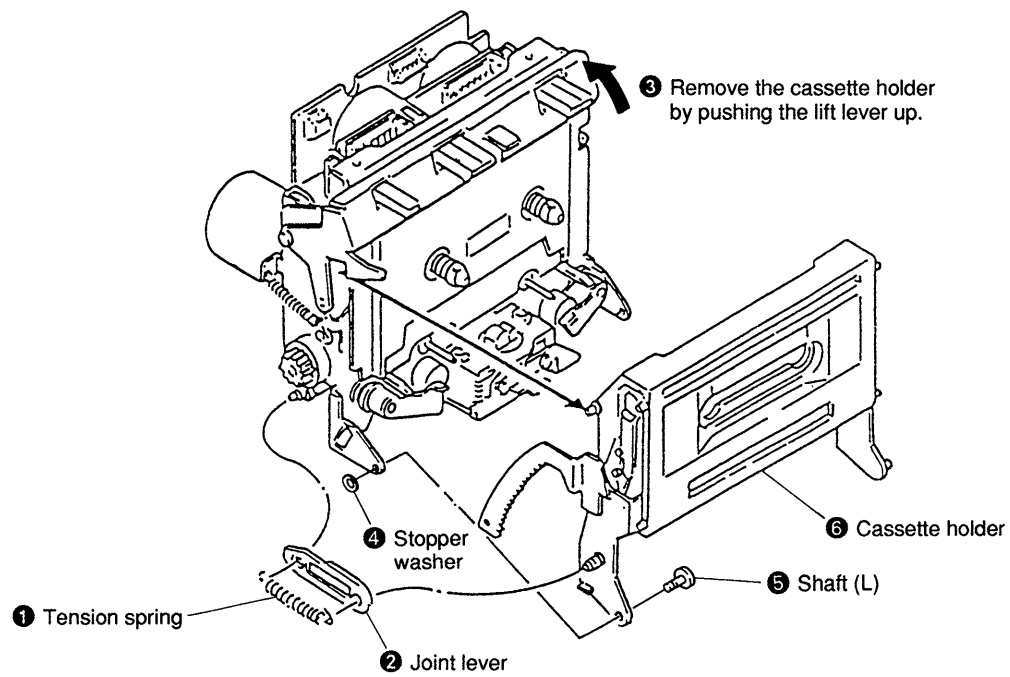
- ① Press the EJECT button



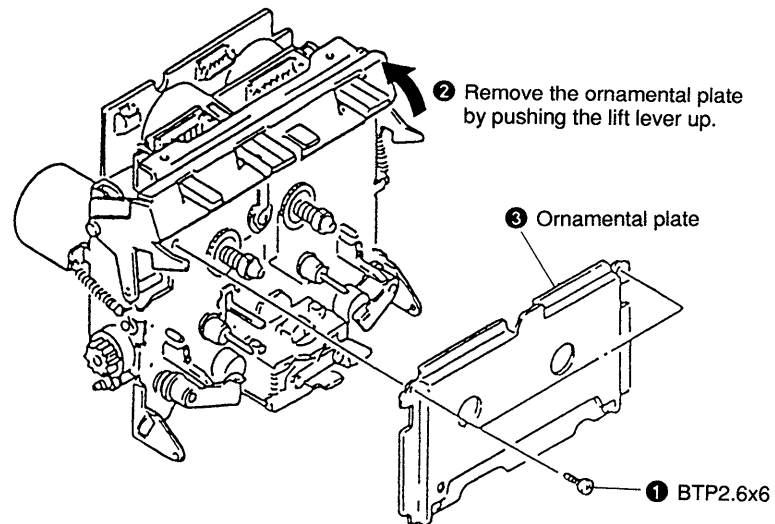
2-2. MECHANISM DECK BLOCK



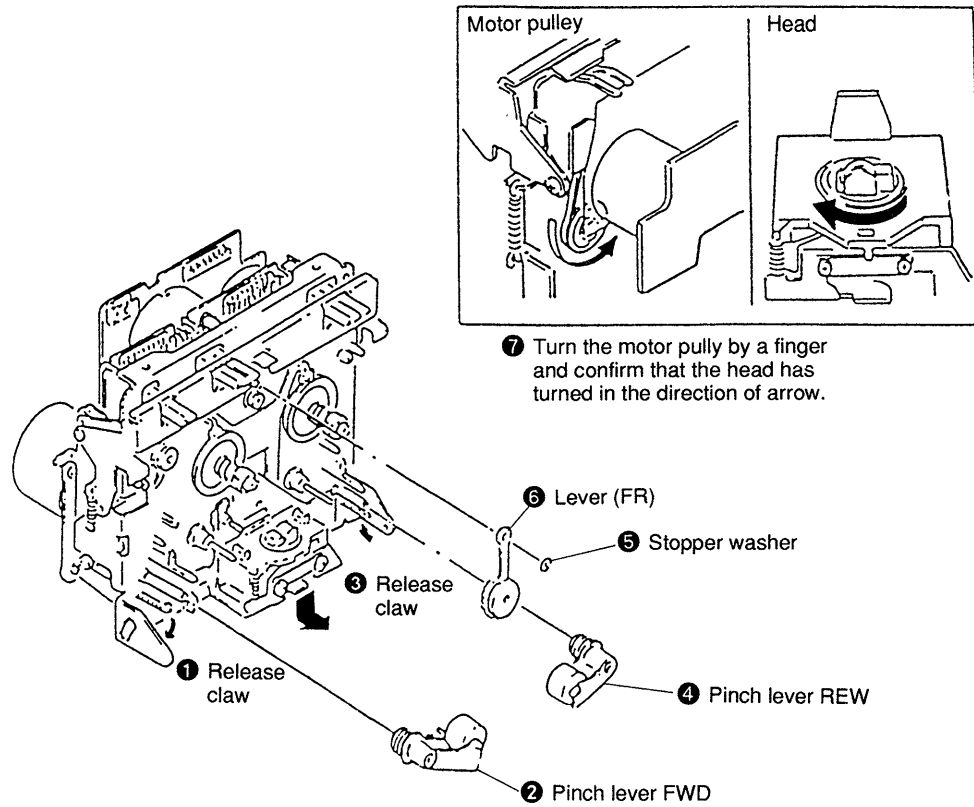
2-3-1. CASSETTE HOLDER



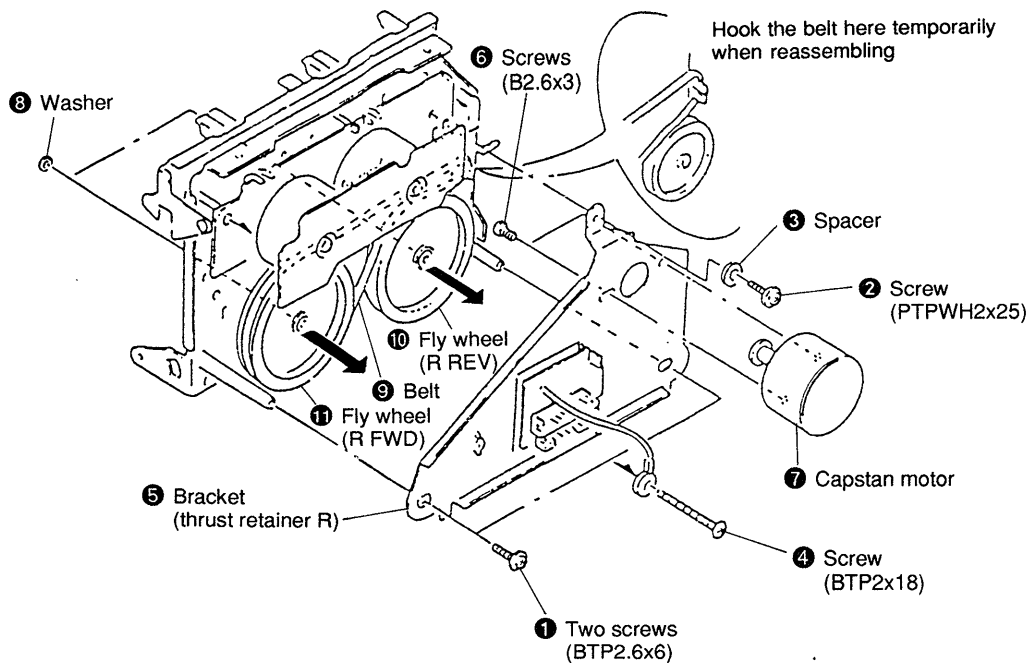
2-3-2. ORNAMENTAL PLATE



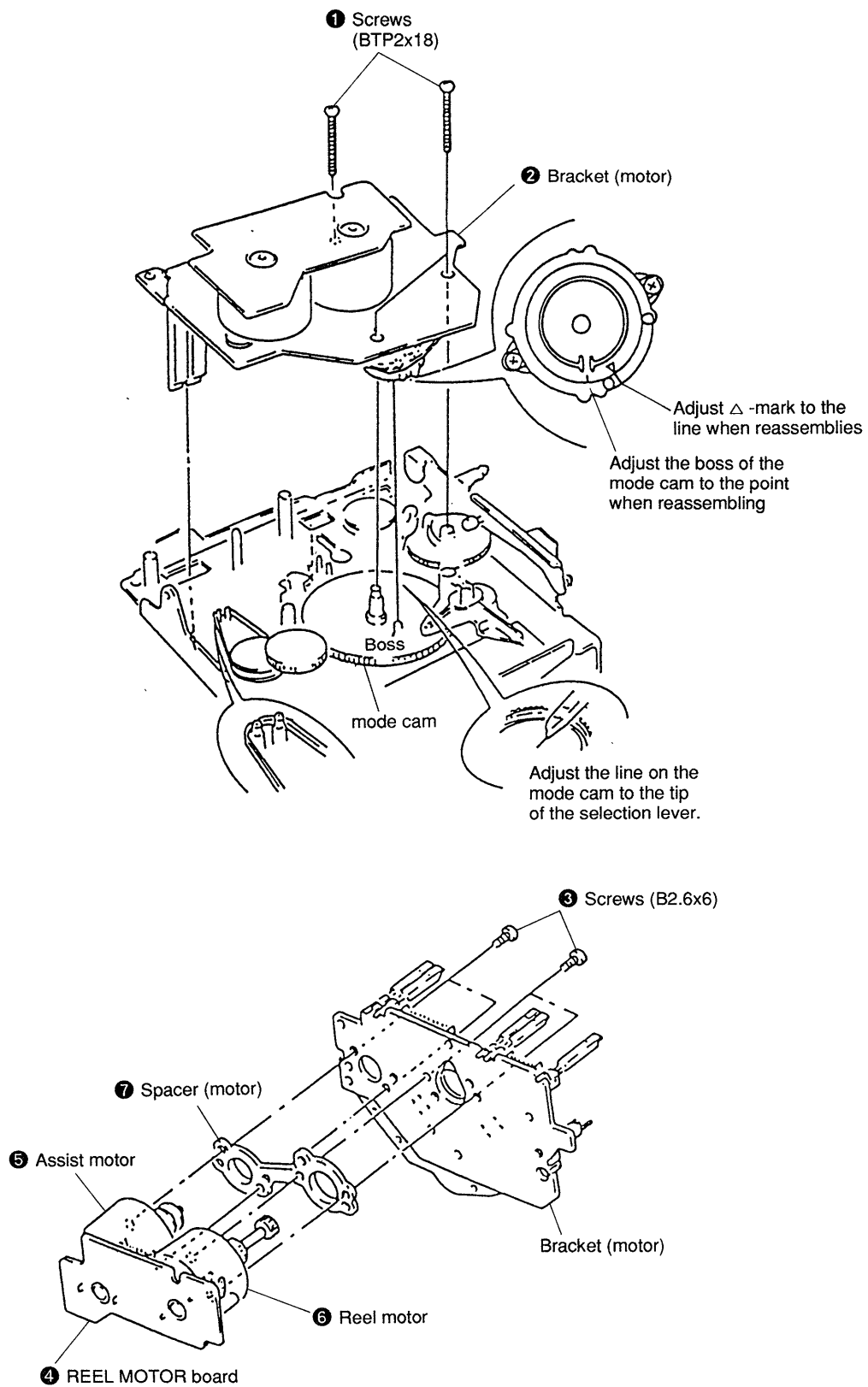
2-3-3. PINCH LEVER, HEAD



2-3-4. CAPSTAN MOTOR, FLY WHEEL



2-3-5. REEL AND ASSIST MOTORS



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :

record/playback head	pinch roller
erase head	rubber belt
capstan	idler
2. Demagnetize the record/playback and erase head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	30 — 60 g • cm (0.42 — 0.83 oz • inch)
FWD Back tension	CQ-102C	1 — 5 g • cm (0.014 — 0.063 oz • inch)
REV	CQ-102RC	30 — 60 g • cm (0.42 — 0.83 oz • inch)
REV Back tension	CQ-102RC	1 — 5 g • cm (0.014 — 0.063 oz • inch)
FF, REW	CQ-201B	65 — 90 g • cm (0.90 — 1.25 oz • inch)

3-2. ELECTRICAL ADJUSTMENTS

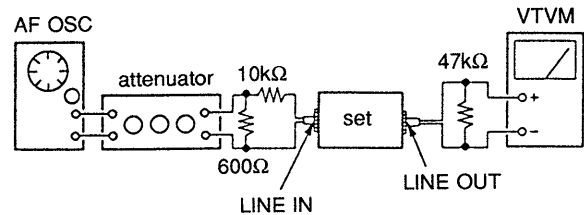
Note : The adjustments should be performed in the order given in this service manual. As a rule, adjustments about playback should be performed before those about recording.
The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch	: OFF
DIRECTION switch	: ⇄
MPX FILTER switch	: OFF
TIMER switch	: OFF

- Standard Record :
Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

— Record Mode —



0dB = 0.775V

Standard Input Level

Input Terminal	LINE IN
source impedance	10kΩ
input level	0.5 V (−3.8 dB)

Standard Output Level

Output Terminal	LINE OUT
load impedance	47 kΩ
output level	0.5 V (−3.8 dB)

Test Tape

Type	Signal	Used for
P-4-A100	10 kHz, −10 dB	Azimuth Adjustment
P-4-L300	315 Hz, 0 dB	PB Level Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

Test mode

The set will get into TEST MODE by shorting the pins of TP801 (TEST) on Main board before turning the power on, and TEST MODE functions as follows :

1. Reset the memory before power on.
Method : While press **RESET (Deck A)** and **RESET (Deck B)** together, turn on **POWER**.
2. High speed playback
Pressing HIGH SPEED (DUBBING) button while playback changes to high speed playback and another press of the button returns the set to normal speed playback.
3. Record memory stop
When starting recording, tape counter is reset to zero and counter memory turned on.
4. Remove the short plug offer completion of Adjustment.

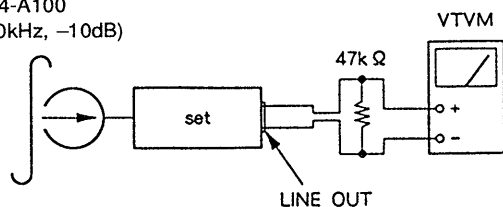
RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT

DECK A DECK B

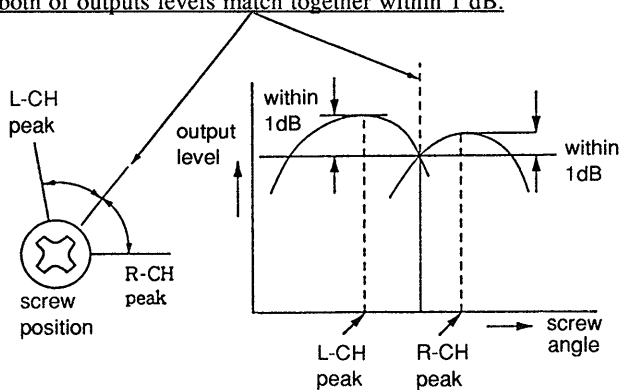
Procedure :

1. Mode : FWD playback

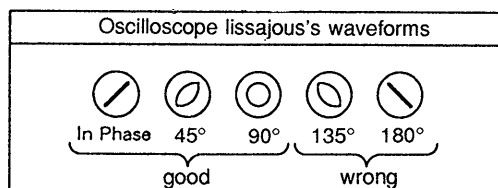
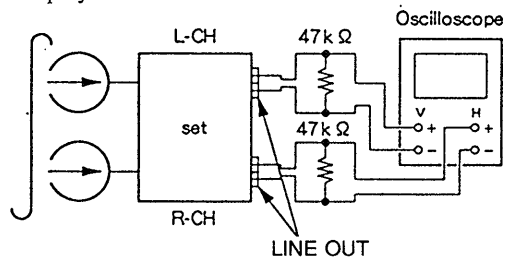
test tape
P-4-A100
(10kHz, -10dB)



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of outputs levels match together within 1 dB.

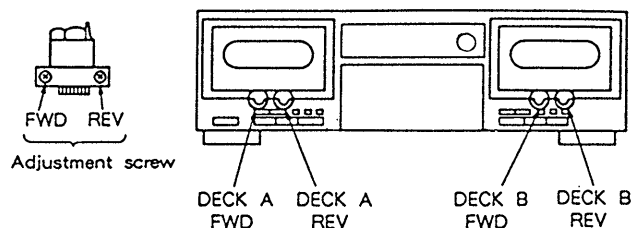


3. Phase Check
Mode : playback



4. Set in the REV mode and repeat the step 1-3.
5. After the adjustments, lock the screws with locking compound.

Adjustment Location : Record/Playback head

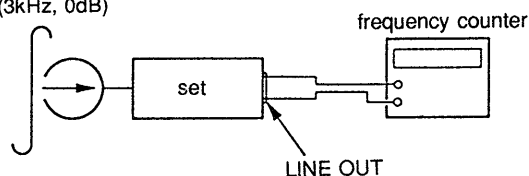


TAPE SPEED ADJUSTMENT DECK A DECK B

Procedure :

- Get into Test mode. (See page 8.)
- Adjust the high speed first, starting from Deck A and Deck B.
- When DECK A adjustment, press the PITCH CONTROL ON/OFF button (PANEL board S963) to OFF.

test tape
WS-48B
(3kHz, 0dB)



(high speed adjustment)

1. Set to FWD playback mode.
2. Press the HIGH button (PANEL board S974).
3. Adjust RV871 (DECK A) and RV881 (DECK B) on Main board so that the frequency counter reading becomes $6,000 \pm 30$ Hz.

(normal speed adjustment)

1. Set to FWD playback mode.
2. Press the HIGH button (PANEL board S974) again.
3. Adjust RV872 (DECK A) and RV882 (DECK B) on Main board so that the frequency counter reading becomes $3,000 \pm 15$ Hz.

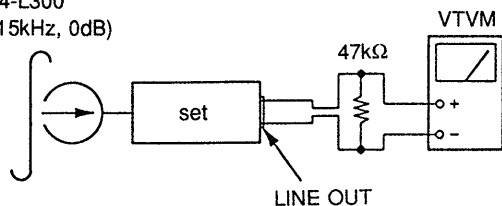
Frequency difference between FWD mode and REV mode should be within 60 Hz (high speed) or 30 Hz (normal speed).
Frequency difference between deck A and deck B should be within 20 Hz (high speed) or 10 Hz (normal speed).

PLAYBACK LEVEL ADJUSTMENT DECK A DECK B

Procedure :

1. Mode : playback

test tape
P-4-L300
(315kHz, 0dB)



Adjust RV131 (L-CH) and RV231 (R-CH) for Deck A and RV151 (L-CH) and RV251 (R-CH) for Deck B so that the reading on VTVM meter the adjustment level below.

Adjustment Level :

LINE OUT level : $-7.7 \text{ dB} \pm 0.5 \text{ dB}$ (0.30 to 0.34 V)

Level difference between channels : less than 0.5 dB.

Check that the LINE OUT level does not change even if playback and stop operation is repeated several times.

PITCH CONTROL SPEED ADJUSTMENT

1. Get into Test mode.
2. Set TAPE SPEED (RV891) to the center and press the PITCH CONTROL ON/OFF button (PANEL board S963) to ON.
3. Playback Deck A and Deck B FWD and adjust RV891.

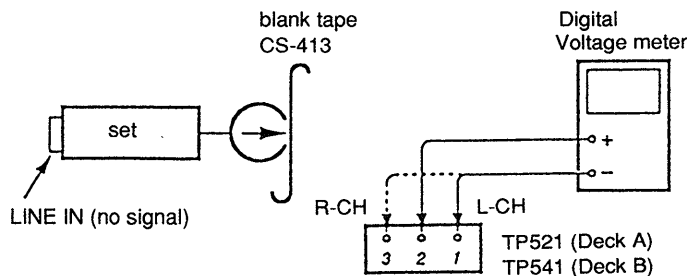
Adjustment Level : 3000 Hz ± 15 Hz

- Frequency difference between Deck A and Deck B should be within 10 Hz.
- Speed difference : VOL MAX 3900 Hz ± 70 Hz
: VOL MIN 2100 Hz ± 70 Hz

BIAS CURRENT ADJUSTMENT

1. Set RV121 and RV221 (DECK A), RV141 and RV241 (DECK B) to mechanical center and turn the set recording mode.
2. Connect digital voltmeter as shown by the following table.
3. Adjust the following transformers for the minimum readings on the digital voltmeter.

DECK		Mesurement Point	Adjustment	Level
A	L	① and ②, TP521	T121	less than 80 mV
	R	② and ③, TP521	T221	
B	L	① and ②, TP541	T141	
	R	② and ③, TP541	T241	



Adjustment Level : 80mV

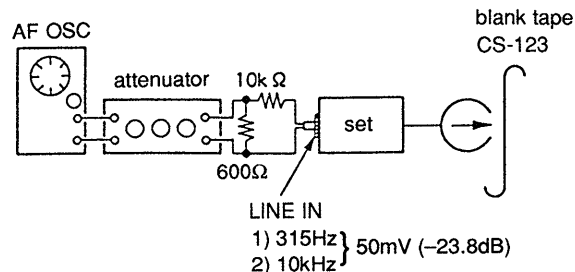
RECORD BIAS ADJUSTMENT DECK A DECK B

Setting :

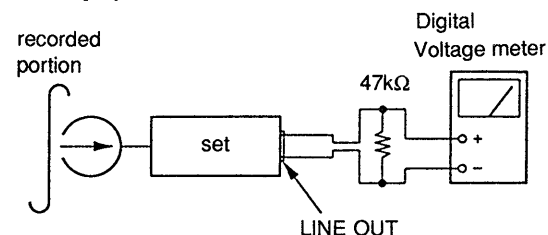
- REC LEVEL control : standard record (See page 8.)
- Get into Test mode. (See page 8.)

Procedure :

1. Mode : record



2. Mode : playback



3. Deck A is RV121 (L-CH) and RV221 (R-CH), deck B is RV141 (L-CH) and RV241 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level :

1. The playback output of 10 kHz level difference against 315 Hz reference should be $\pm 0.5 \text{ dB}$.

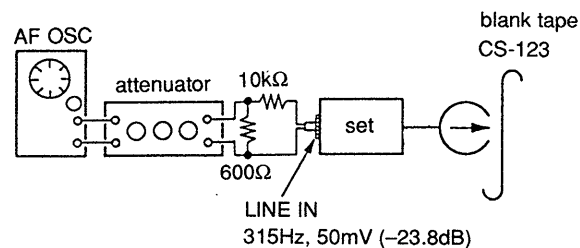
RECORD LEVEL ADJUSTMENT DECK A DECK B

Setting :

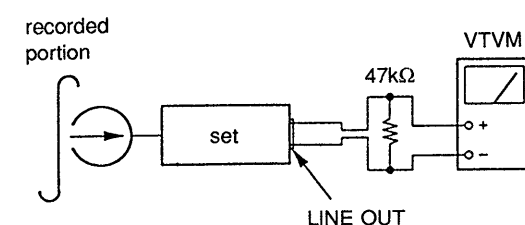
- REC LEVEL control : standard record (See page 8.)
- Get into Test mode. (See page 8.)

Procedure :

1. Mode : record



2. Mode : playback



3. Deck A is RV301 (L-CH) and RV401 (R-CH), deck B is RV351 (L-CH) and RV451 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level : $-23.8 \text{ dB} \pm 0.5 \text{ dB}$ (47 to 53 mV)

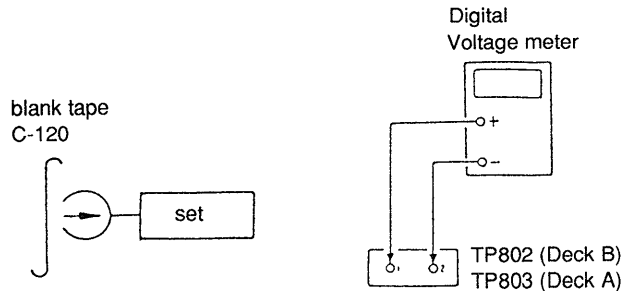
QUICK REVERSE SENSITIVITY ADJUSTMENT

DECK A **DECK B**

Conditions :

DIRECTION MODE switch : \rightleftarrows

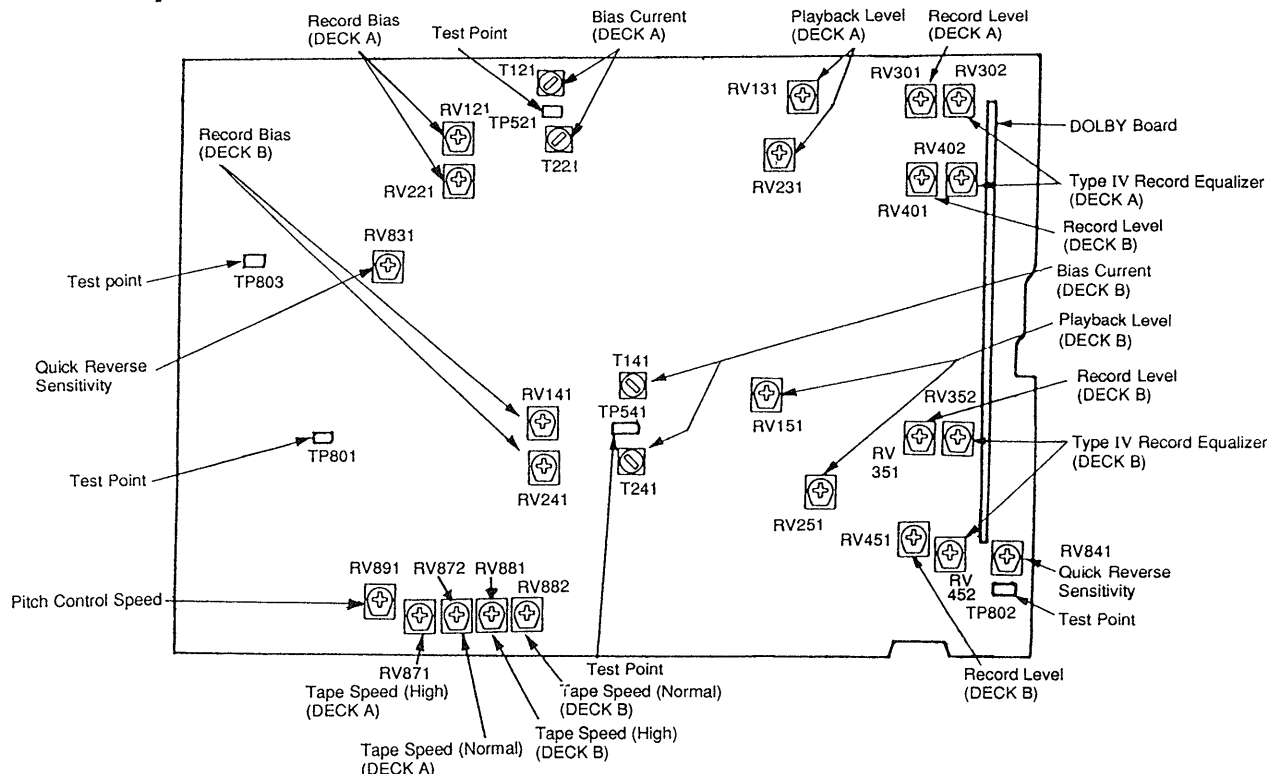
Adjustment procedure :



1. Connect the digital voltmeter to test point TP803 (DECK A)/TP802 (DECK B).
2. Load C-120 tape cassette and playback the leading portion in FWD mode.
3. Adjust the RV831 (DECK A), RV841 (DECK B) for 4.5 \pm 0.5 V reading on the digital voltmeter.
4. Playback C-120 tape cassette in FWD mode again.
5. Confirm that the reading on the digital voltmeter is "L" level at the magnetic portion of the tape.
6. Confirm that the tape stop around the tape end (border of the leading and the magnetic portions).

Adjustment Location

[MAIN BOARD] — Conductor Side —



RECORD EQ (TYPE IV) ADJUSTMENT

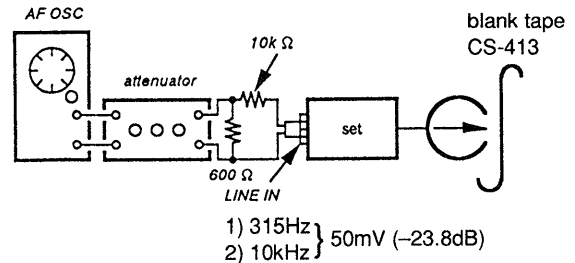
DECK A **DECK B**

Setting :

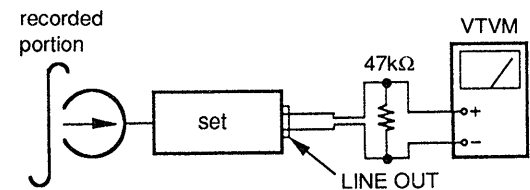
REC LEVEL control : standard record (See page 8.)

Procedure :

1. Mode : record



2. Mode : playback



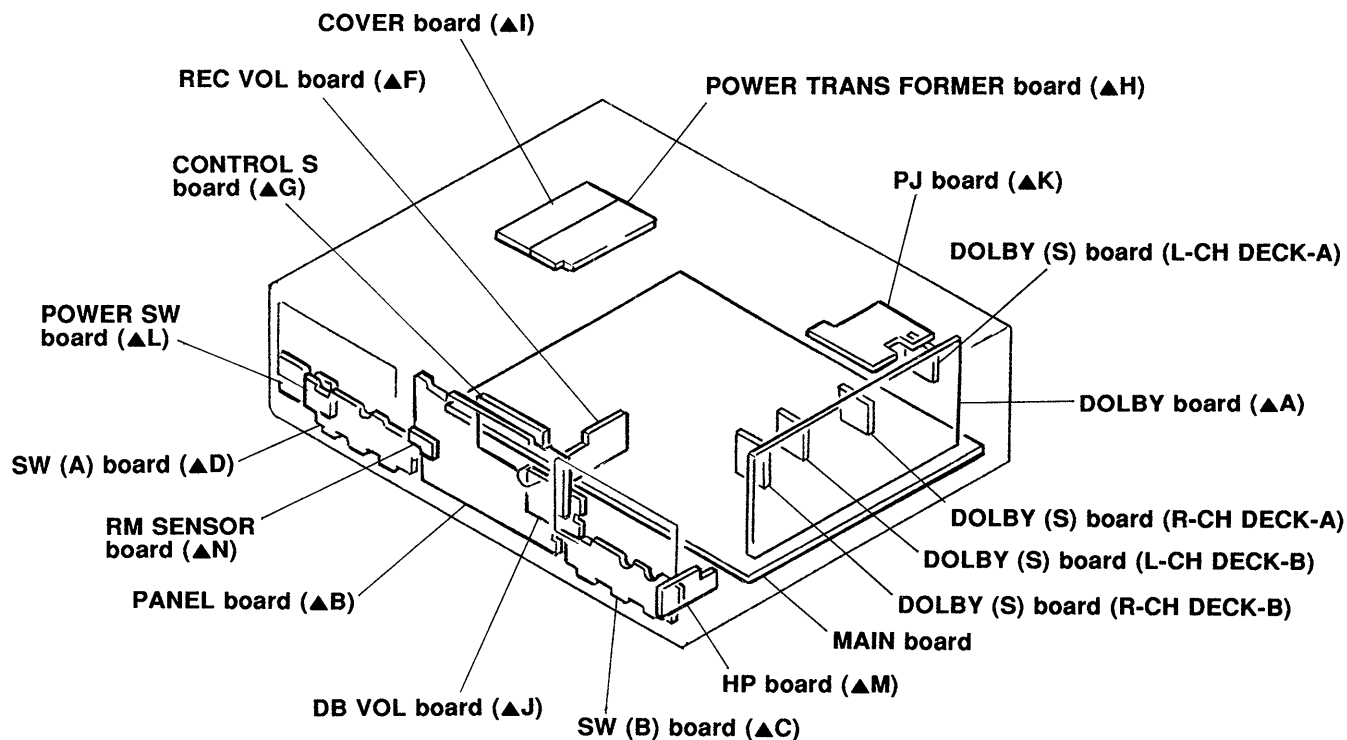
3. Playback the signal recorded in step 1.
Adjust RV302 (L-CH) and RV402 (R-CH) for Deck A and RV352 (L-CH) and RV452 (R-CH) for Deck B so that the difference of L-ch and R-ch of 315 kHz and 10 kHz becomes within 1 dB.

Adjustment Level :

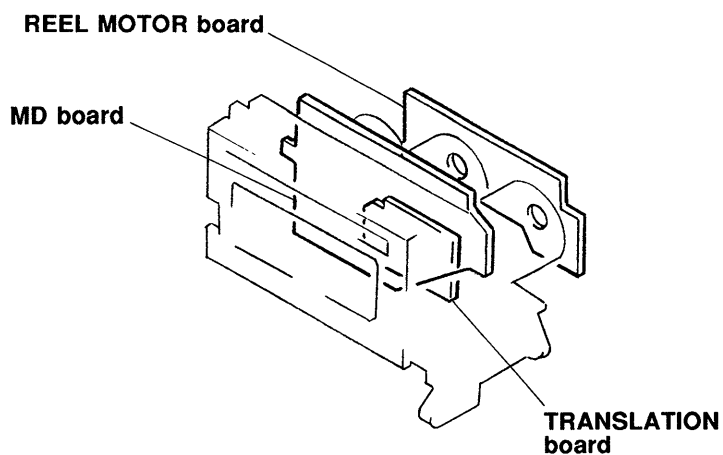
1. The playback output of 10 kHz level difference against 315 Hz reference should be $\pm 4 \text{ dB}$.

SECTION 4 DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION



NOTE : ▲A-▲D, ▲F-▲N are including in Panel board.



4-2. IC PIN FUNCTIONS

• IC801 SYSTEM CONTROLLER (μ PD78043AGF-023-3B9)

Pin No.	Pin Name	I/O	Function
1	REC/PB (A)	O	A deck REC/PB switching output
2	BIAS CAL4	O	BIAS CAL control 4
3	BIAS CAL3	O	BIAS CAL control 3
4	BIAS CAL2	O	BIAS CAL control 2
5	BIAS CAL1	O	BIAS CAL control 1
6	VOL. LED $\overline{\text{ON}}$ /OFF	O	REC VOL LED light switching output
7	AMS/ $\overline{\text{BS}}$	O	AMS/BS switching output
8	VDD	—	+5V
9	FL. SCLK	O	Clock output to the display controller (IC901)
10	FL. S OUT	O	Information output to the display controller (IC901)
11	FL. S IN	I	Information input from the display controller (IC901)
12	FL. SYNC	O	Communication SYNC output to the display controller (IC901)
13	DISP. RESET MD. RESET	O	Reset information output to the display controller (IC901) and mechanism controller (IC802)
14	MD. SCLK	O	Clock output to the mechanism controller (IC802)
15	MD. S OUT	O	Information output to the mechanism controller (IC802)
16	MD. S IN	I	Information input from the mechanism controller (IC802)
17	RESET	I	System reset input
18	MPX. $\overline{\text{ON}}$ /OFF	O	MPX ON/OFF switching output
19	POWER. OUT	O	Power off delay output
20	A. VSS	—	GND
21	METER. Lch	I	Meter Lch input
22	METER. Rch	I	Meter Rch input
23	VOL. A/D	I	REC VOL rotation angle detection input
24	KEY2	I	Key input 2
25	KEY1	I	Key input 1
26	AMS. IN	I	AMS signal input
27	QUICK. B	I	Quick sensor signal input: (B deck)
28	QUICK. A	I	Quick sensor signal input: (A deck)
29	A VDD	—	+5V
30	V Ref	—	
31	MD. S REQ	I	Communication REQ signal input from the mechanism controller (IC802)
32	XT2	—	Not used (open)
33	Vss	—	GND
34	X1	—	Clock 4.0 MHz
35	X2	—	Clock 4.0 MHz
36	LEVEL CAL 2	O	Level CAL control 2
37	LEVEL CAL 1	O	Level CAL control 1
38	Gp. CAL 2	O	Gp CAL control 2
39	Gp. CAL 1	O	Gp CAL control 1
40	LEVEL CAL 2	O	Level CAL control 2
41	LEVEL CAL 1	O	Level CAL control 1

Pin No.	Pin Name	I/O	Function
42	Gp. CAL 2	O	Gp CAL control 2
43	Gp. CAL 1	O	Gp CAL control 1
44	H.P STB	O	Strobe signal output for writing data to the electronic VOL (IC60)
45	COM. DATA. OUT	O	Information output to the backup (IC810) and electronic VOL (IC60)
46	COM. CLOCK. OUT	O	Clock output to the backup (IC810) and electronic VOL (IC60)
47	POWER IN	I	Power detection input
48	IC	—	GND
49	VOL. UP	O	Rotates REC VOL clockwise
50	VOL. DOWN	O	Rotates REC VOL counterclockwise
51	VOL. SP. H/L	O	REC VOL rotation control output
52	V _{DD}	—	+5V
53	BIAS. CAL 4	O	Bias control 4
54	BIAS. CAL 3	O	Bias control 3
55	BIAS. CAL 2	O	Bias control 2
56	BIAS. CAL 1	O	Bias control 1
57	PITCH. CON ON/OFF	O	Pitch control ON/OFF switching output
58	BIAS. ON/OFF	O	Bias ON/OFF switching output
59	RELAY. ON/OFF	O	Relay ON/OFF switching output
60	REC MUTE. ON/OFF	O	REC MUTE ON/OFF switching output
61	BIAS. ON/OFF	O	Bias ON/OFF switching output
62	RELAY. ON/OFF	O	Relay ON/OFF switching output
63	REC. MUTE. ON/OFF	O	REC MUTE ON/OFF switching output
64	PB. MUTE. A/B	O	PB mute A deck/B deck switching output
65	AMS. SEL. A/B	O	AMS A deck/B deck switching output
66	CAL. ON/OFF	O	Auto CAL ON/OFF switching output
67	OSC. H/L	O	CAL oscillation frequency switching output
68	OSC. ON/OFF	O	CAL oscillation ON/OFF switching output
69	LINE. MUTE. ON/OFF	O	Line mute ON/OFF switching output
70	SPEED. H/L	O	Speed H/L switching output
71	V. LOAD	—	-7.5V
72	IN. SEL 2	O	Input signal switching control output 2
73	IN. SEL 1	O	Input signal switching control output 1
74	OUT. SEL	O	Output signal switching output
75	REC/PB	O	REC/PB switching output
76	DOL. S. ON/OFF	O	Dolby S ON/OFF switching output
77	DOL. B/C	O	Dolby B/C switching output
78	DOL. ON/OFF	O	Dolby ON/OFF switching output
79	A. DOL 1	O	Dolby switching control output 1
80	A. DOL 2	O	Dolby switching control output 2

• IC802 MECHANISM CONTROLLER (M38002M2-185FP)

Pin No.	Pin Name	I/O	Function
1	A. CAM. SW2	I	Rotary encoder (S1001-A) detection 2 input
2	A. CAM. SW3	I	Rotary encoder (S1001-A) detection 3 input
3	A. CAM. SW4	I	Rotary encoder (S1001-A) detection 4 input
4	A. FF. TRQ	O	FF torque control output
5	A. PLAY. TRQ	O	PLAY torque control output
6	A. REEL. FF	O	FF reel motor control output
7	A. REEL. REW	O	REW reel motor control output
8	A. ASIST. R	O	ASIST motor control R output
9	A. ASIST. F	O	ASIST motor control F output
10	A. CAM. TRQ	O	CAM torque control output
11	A. PB. 70	O	PB 70 μ information output
12	S. REQ	O	Communication REQ signal output to the system controller (IC801)
13	S. CLOCK	I	Clock input from the system controller (IC801)
14	S. OUT	O	Information output to the system controller (IC801)
15	S. IN	I	Information input from the system controller (IC801)
16	CAP. SPEED	O	Capstan speed control output
17	CAP. ON/OFF	O	Capstan ON/OFF switching output
18	CN Vss	I	Connected to GND.
19	RES	I	Reset information input from the system controller (IC801)
20	B TYPE II	O	Tape type II information output
21	B TYPE I	O	Tape type I information output
22	XIN	I	} Clock 4.0 MHz
23	XOUT	O	
24	Vss	—	GND
25	B. PB. 70	O	PB 70 μ information output
26	B. CAM. TRQ	O	CAM torque control output
27	B. ASIST. F	O	ASIST motor control F output
28	B. ASIST. R	O	ASIST motor control R output
29	B. REEL. REW	O	REW reel motor control output
30	B. REEL. FF	O	FF reel motor control output
31	B. PLAY. TRQ	O	PLAY torque control output
32	B. FF. TRQ	O	FF torque control output
33	B. CAM. SW1	I	Rotary encoder (S1001-B) detection 1
34	B. CAM. SW2	I	Rotary encoder (S1001-B) detection 2
35	B. CAM. SW3	I	Rotary encoder (S1001-B) detection 3
36	B. CAM. SW4	I	Rotary encoder (S1001-B) detection 4
37	B. OPEN. SW	I	OPEN switch (S1004-B) detection input
38	B. CLOSE. SW	I	CLOSE switch (S1003-B) detection input
39	B. DOOR. SW	I	DOOR switch (S1002-B) detection input
40	B. FWD. TAB	I	FWD, TAB switch (S1005-B) detection input

(A deck)

(B deck)

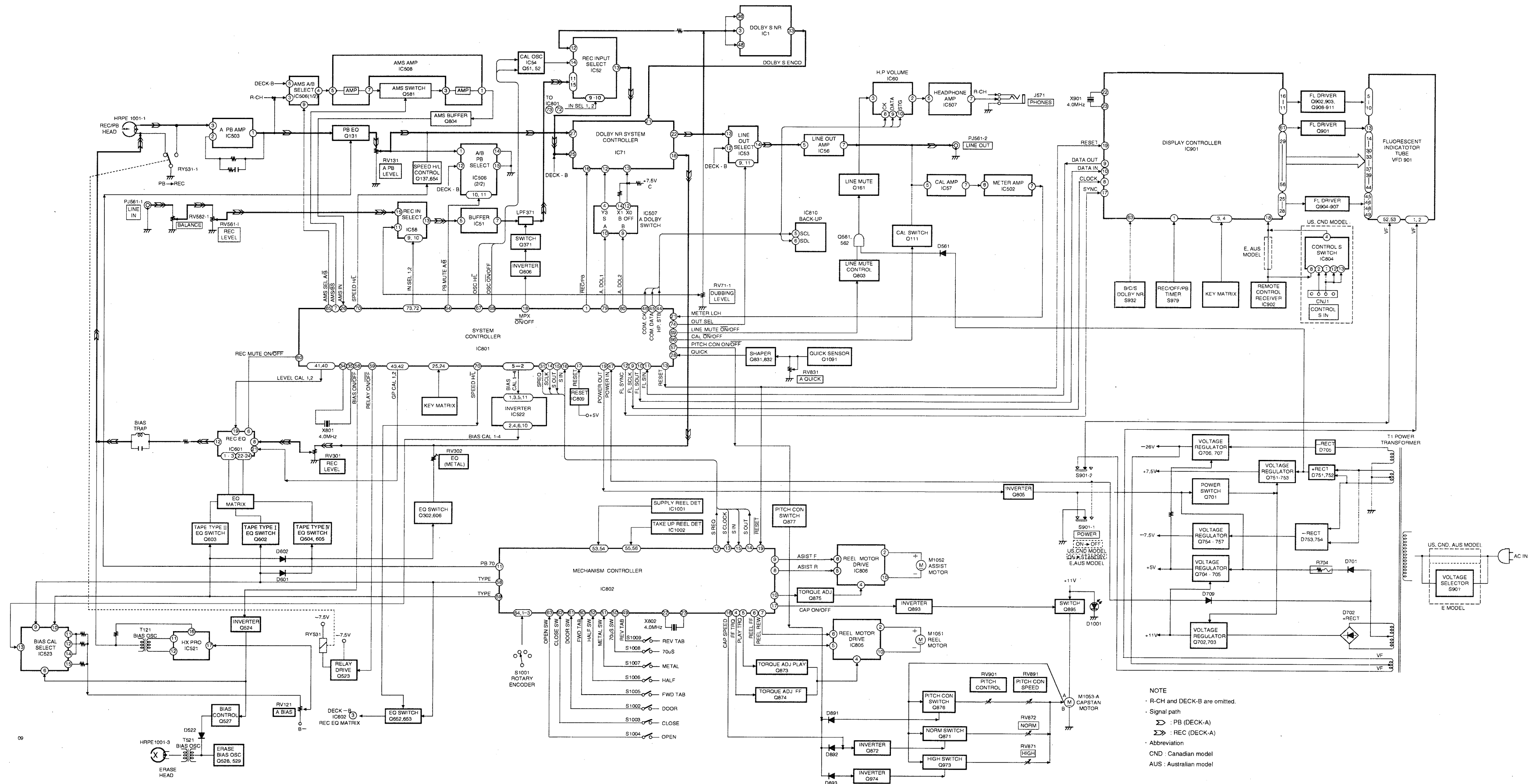
(B deck)

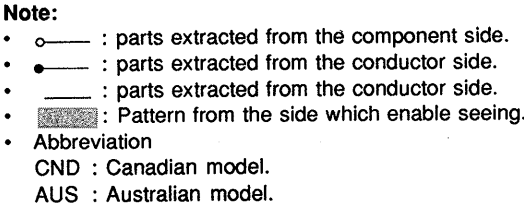
Pin No.	Pin Name	I/O	Function	
41	B. T REEL. OUT	I	T reel OUT sensor waveform input	(B deck)
42	B. T REEL. IN	I	T reel IN sensor waveform input	
43	B. S REEL. OUT	I	S reel OUT sensor waveform input	
44	B. S REEL. IN	I	S reel IN sensor waveform input	
45	B. HALF	I	Half switch (S1006-B) detection input	
46	B. METAL	I	METAL switch (S1007-B) detection input	
47	B. 70 μ . SW	I	70 μ switch (S1008-B) detection input	
48	B. REV. TAB	I	REV. TAB switch (S1009-B) detection input	
49	A. REV. TAB	I	REV. TAB switch (S1006-A) detection input	(A deck)
50	A. 70 μ . SW	I	70 μ switch (S1008-A) detection input	
51	A. METAL. SW	I	METAL switch (S1007-A) detection input	
52	A. HALF. SW	I	HALF switch (S1006-A) detection input	
53	A. S. REEL IN	I	S reel IN sensor waveform input	
54	A. S. REEL OUT	I	S reel OUT sensor waveform input	
55	A. T. REEL IN	I	T reel IN sensor waveform input	
56	A. T. REEL OUT	I	T reel OUT sensor waveform input	
57	Vcc	—	+5V power supply	
58	A TYPE I	O	Tape type I information output	(A deck)
59	A TYPE II	O	Tape type II information output	
60	A. FWD. TAB	I	FWD. TAB switch (S1005-A) detection input	
61	A. DOOR. SW	I	DOOR switch (S1002-A) detection input	
62	A. CLOSE. SW	I	CLOSE switch (S1003-A) detection input	
63	A. OPEN. SW	I	OPEN switch (S1004-A) detection input	
64	A. CAM. SW1	I	Rotary encoder (S1001-A) detection I input	

• IC901 DISPLAY CONTROLLER (M38122M2-103FP)

Pin No.	Pin Name	I/O	Function
1	KEY3	I	Key input 3
2	KEY2	I	Key input 2
3	KEY1	I	Key input 1
4	KEY0	I	Key input 0
5		—	} Open
6		—	
7		—	GND
8	CLOCK	I	Clock input from the system controller (IC801)
9	DATA. OUT	O	Information output to the system controller (IC801)
10	DATA. IN	I	Information input from the system controller (IC801)
11	G6	O	FL display grid control G6 output
12	G5	O	FL display grid control G5 output
13	G4	O	FL display grid control G4 output
14	G3	O	FL display grid control G3 output
15	G2	O	FL display grid control G2 output
16	G1	O	FL display grid control G1 output
17	SYNC	O	Communication SYNC output to the system controller (IC801)
18	SIRCS	I	CIRC input from the remote commander reception (IC902)
19	RESET	I	Reset information input from the system controller (IC801)
20	XCIN	I	Not used (connected to GND).
21	XCOUT	O	Not used (open).
22	XIN	I	} Clock (4.0MHz)
23	XOUT	O	
24	Vss	—	GND
25 to 56	P1 to P32	O	FL display segment control output P1 to P32
57	Vcc	—	+5V power supply
58	V. DISP	—	–25V power supply
59	A Vss	—	Connected to GND.
60	V REF	—	Connected to +5V.
61	P33		FL display segment control output P33
62			Connected to GND.
63		I	Connected to GND.
64	KEY4	I	Key input 4

4-3. BLOCK DIAGRAM

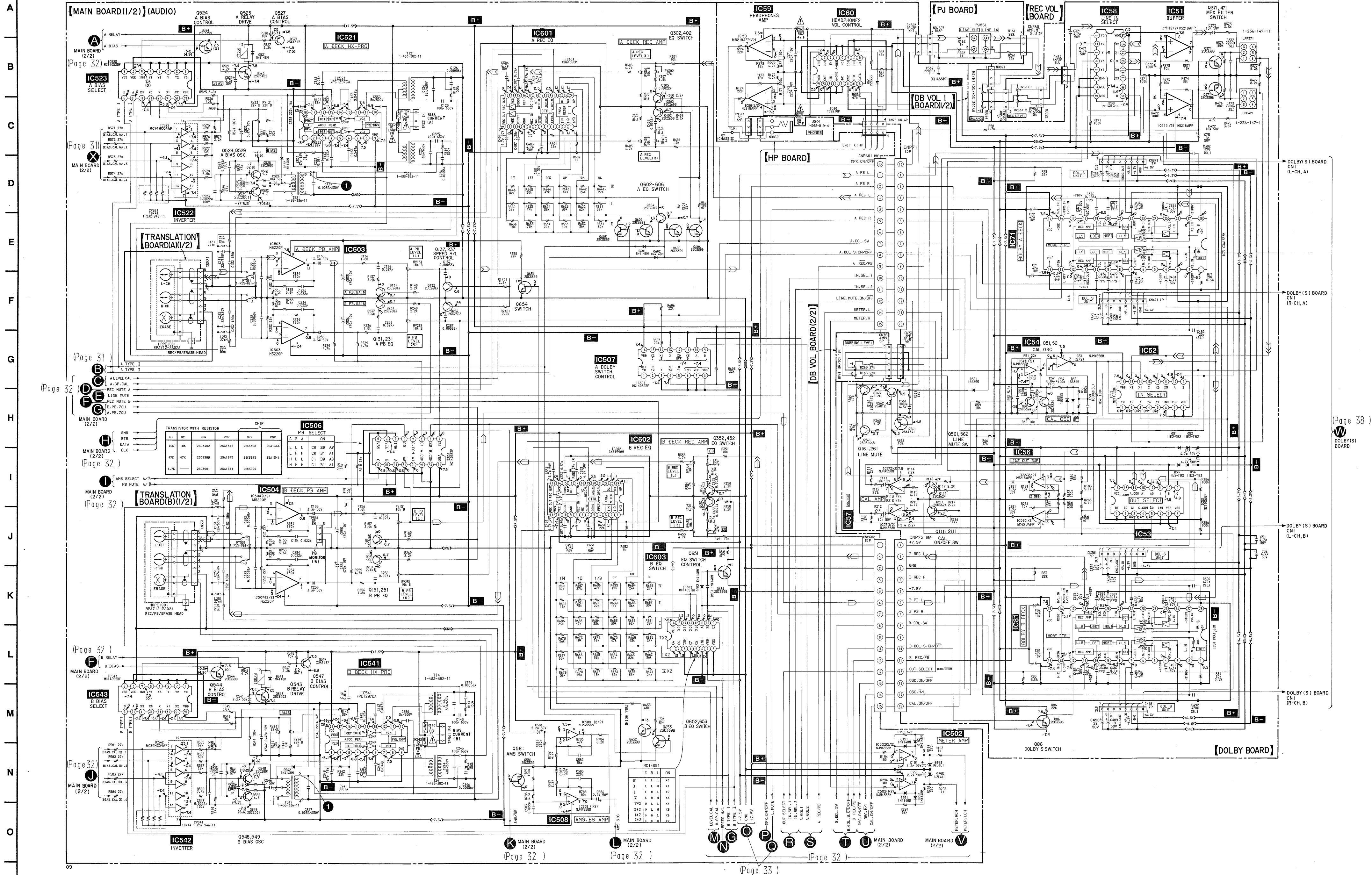




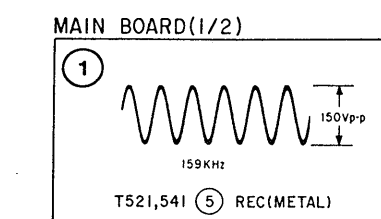
4-5. SCHEMATIC DIAGRAM — MAIN (1/2), PANEL BLOCK — (AUDIO)

Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D51	B-2	IC71	B-3	Q603	D-8
D52	B-2	IC81	J-2	Q604	D-8
D53	C-2	IC502	E-8	Q605	D-8
D54	C-2	IC503	C-11	Q606	D-9
D55	F-5	IC504	H-11	Q651	H-9
D56	F-5	IC505	E-10	Q652	Q-9
D61	G-5	IC507	E-7	Q653	Q-9
D191	E-8	IC508	E-9	Q654	Q-9
D192	E-8	IC521	C-15	Q701	F-14
D193	E-8	IC522	C-17	Q702	D-14
D291	F-8	IC523	C-16	Q703	E-13
D292	F-8	IC541	G-13	Q704	F-14
D293	F-8	IC542	G-15	Q705	E-14
D521	C-13	IC543	G-15	Q706	E-16
D522	B-15	IC601	C-9	Q707	D-12
D541	G-12	IC602	H-9	Q751	D-12
D542	I-13	IC603	G-9	Q752	D-12
D561	K-5	IC801	G-18	Q753	E-12
D601	D-9	IC802	I-15	Q754	F-12
D602	D-8	IC805	I-18	Q755	F-12
D651	G-10	IC806	H-18	Q756	F-13
D652	G-10	IC807	I-12	Q757	E-12
D701	B-19	IC808	J-10	Q803	K-7
D702	B-17	IC809	G-17	Q804	Q-17
D703	F-14	IC810	H-19	Q806	F-15
D704	E-13	IC1001-A	D-26	Q831	E-18
D705	B-18	IC1001-B	J-26	Q832	E-18
D706	F-15	IC1002-A	D-27	Q841	F-19
D707	E-16	IC1002-B	J-27	Q842	J-7
D708	E-16			Q871	J-16
D709	C-19	Q51	F-5	Q872	J-15
D710	F-15	Q52	F-5	Q873	I-17
D751	B-18	Q86	K-4	Q874	J-17
D752	B-18	Q111	H-4	Q875	H-18
D753	B-18	Q131	C-10	Q876	K-17
D754	B-18	Q132	C-10	Q877	J-15
D755	F-13	Q151	G-11	Q881	J-14
D756	F-13	Q161	G-2	Q882	J-14
D757	E-12	Q211	I-4	Q883	J-13
D758	F-13	Q231	C-11	Q884	J-13
D759	D-12	Q232	D-11	Q885	J-11
D801	H-17	Q251	H-10	Q893	J-13
D802	F-10	Q261	G-2	Q894	J-10
D831	E-18	Q302	C-8	Q895	J-18
D841	E-19	Q352	H-8	Q973	J-16
D851	J-13	Q371	D-4	Q974	J-16
D891	J-15	Q402	C-8	Q1091-A	B-27
D892	J-15	Q452	I-9	Q1091-B	H-27
D893	J-16	Q471	E-4		
D1001-A	E-31	Q523	C-13		
D1001-B	J-31	Q524	C-16		
D1091-A	B-27	Q527	C-15		
D1091-B	G-27	Q528	B-16		
		Q529	B-17		
IC51	D-3	Q543	G-12		
IC54	D-5	Q544	G-14		
IC53	H-2	Q547	H-14		
IC54	F-4	Q548	H-14		
IC56	H-4	Q549	H-14		
IC57	H-3	Q561	K-5		
IC58	D-3	Q562	K-5		
IC59	G-3	Q581	D-9		
IC60	G-4	Q602	D-8		



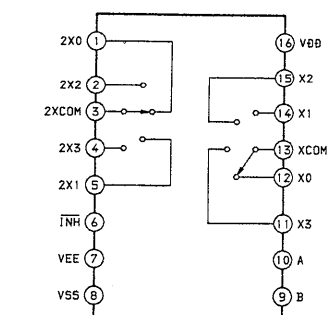
Waveform



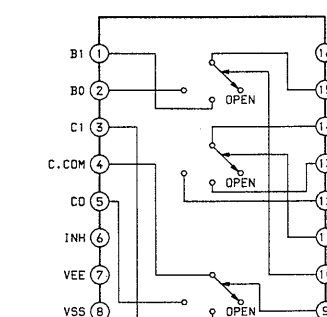
IC Block Diagrams

IC52, 58, 507, 523, 543

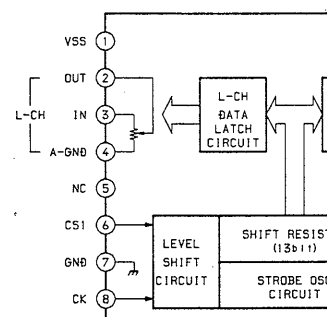
MC14052BF



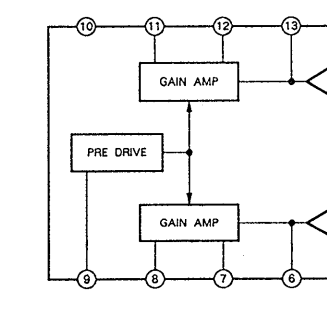
IC53, 506 MC14053BF



IC60 TC9210P



IC521, 541 μPC1297CA

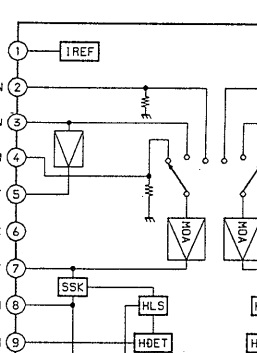


- Note:**
- All capacitors are in μF unless otherwise noted. pF μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - Δ : internal component.
 - \square : adjustment for repair.
 - Voltage and waveforms are dc with respect to ground under no-signal conditions.
 - no mark: STOP
 - () : REC
 - Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circled numbers refer to waveforms.
 - Signal path.
 - \Rightarrow : PB (DECK A)
 - \Rightarrow : PB (DECK B)
 - \Rightarrow : REC (DECK A)
 - \Rightarrow : REC (DECK B)

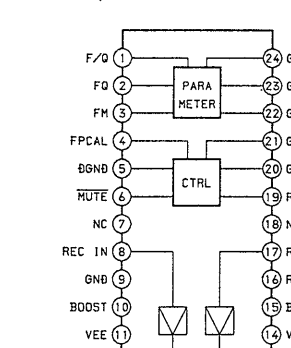
Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ ou sont critiqués pour la sécurité. Ne les remplacez que par une pièce portant le numéro spécifié.

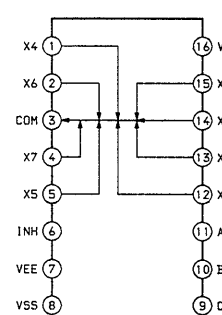
IC71, 81 CXA1563M

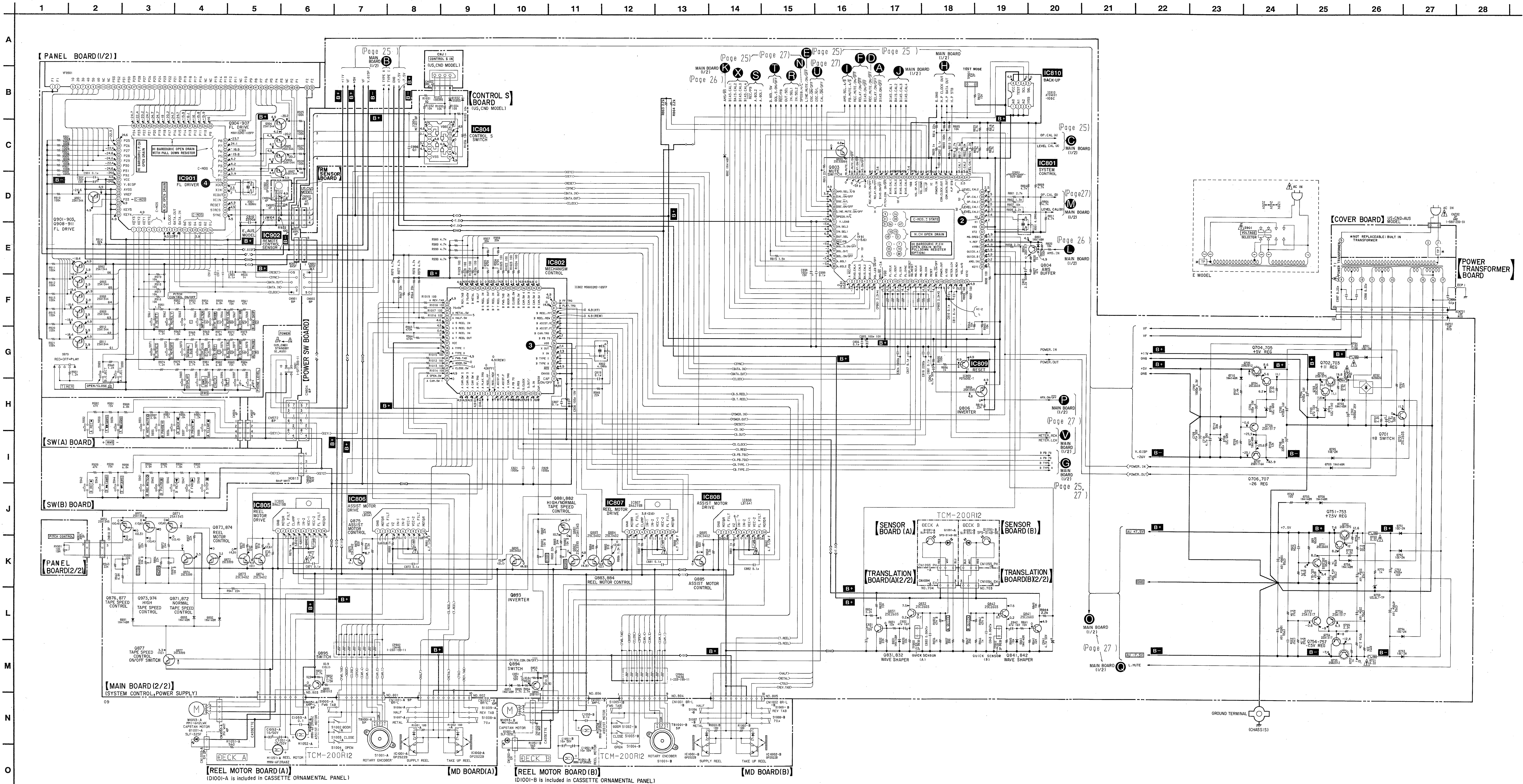


IC601, 602 CXA1598M



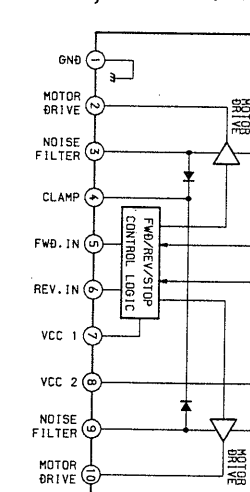
IC603 MC14051BF



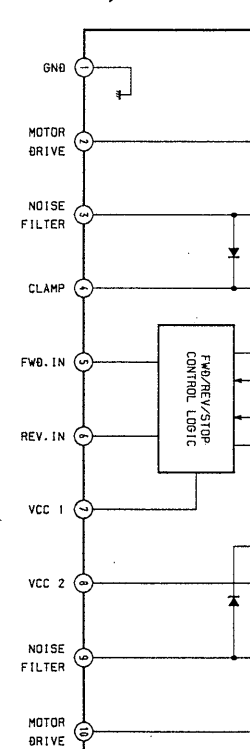


IC Block Diagrams

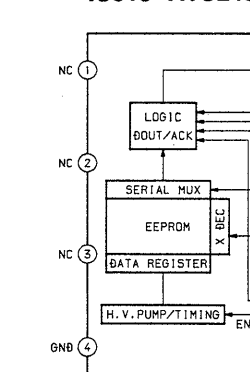
IC806, 808 LB1641



IC805, 807 BA6219B

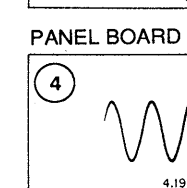
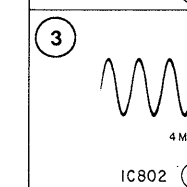
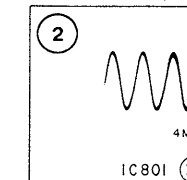


IC810 ATC2401-10SC

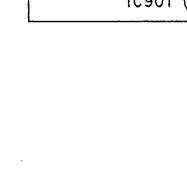


Waveforms

MAIN BOARD (2/2)



PANEL BOARD

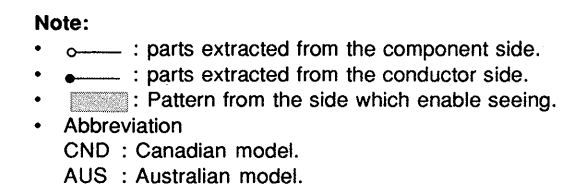


Note:

- All capacitors are in μF unless otherwise noted. pF : μF
- 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- \square : fusible resistor.
- \square : panel designation.

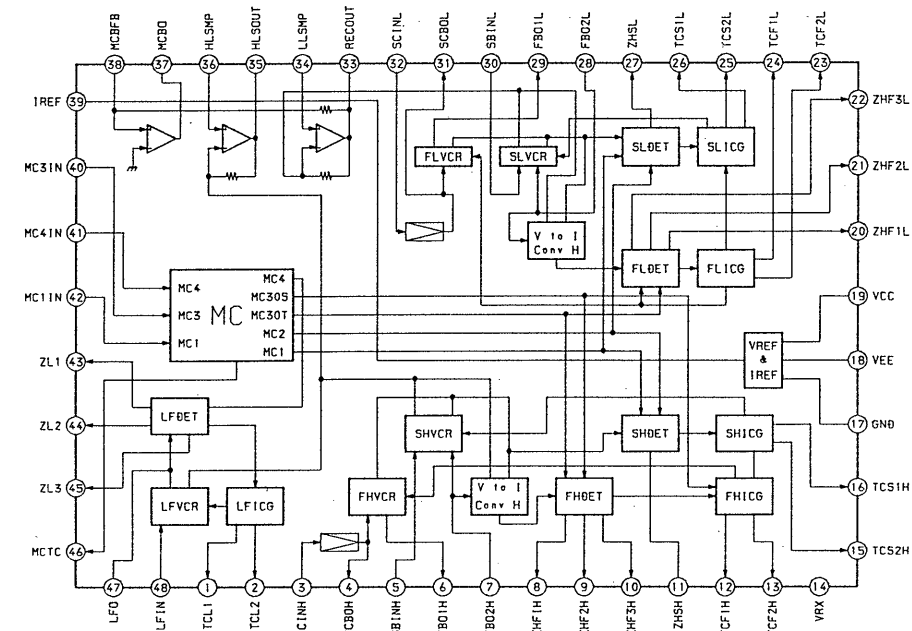
Note:

- The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.
- Les composants identifiés par une marque Δ ou par une ligne pointillée avec la marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



• IC Block Diagram

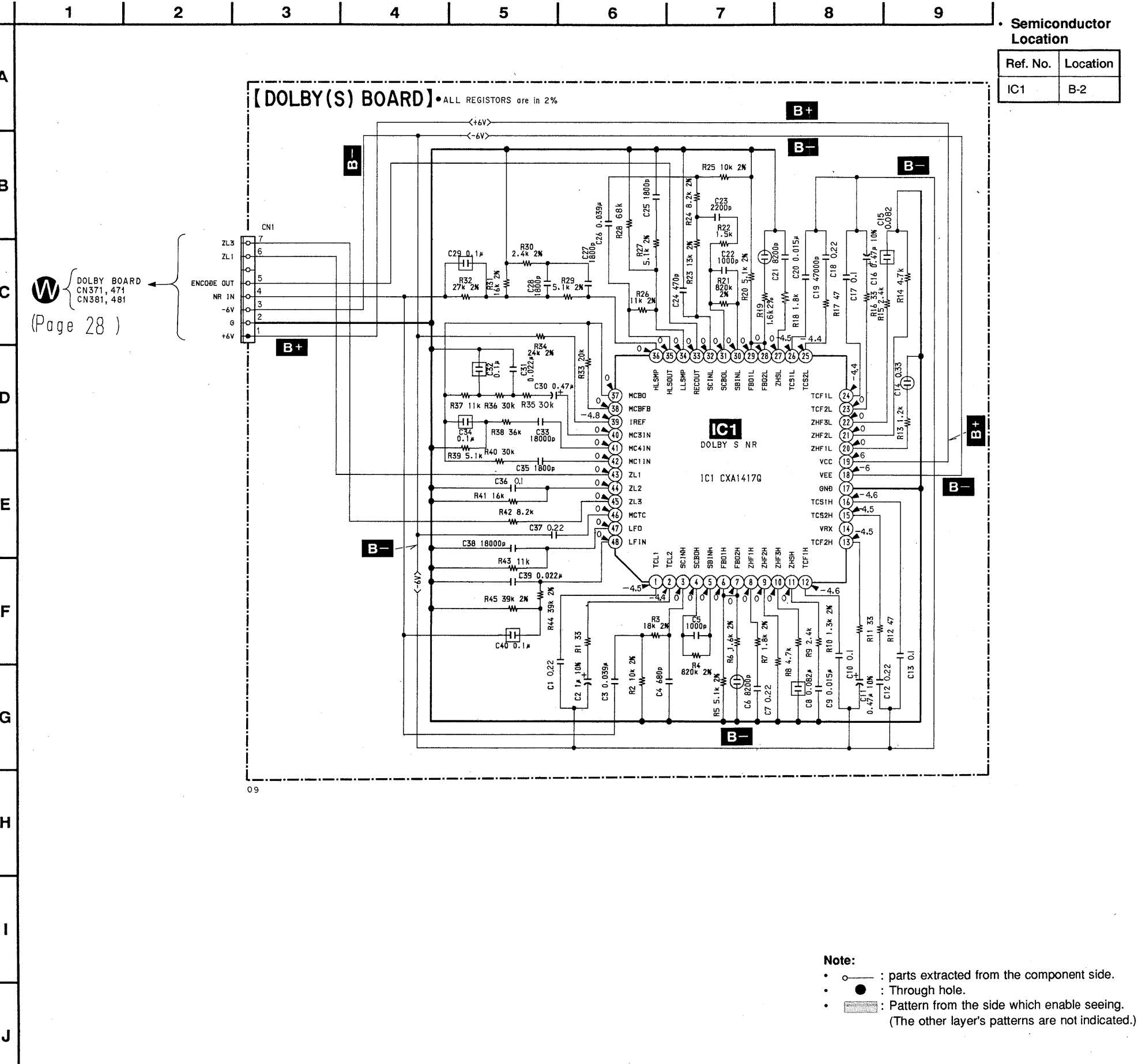
IC1 CXA1417Q



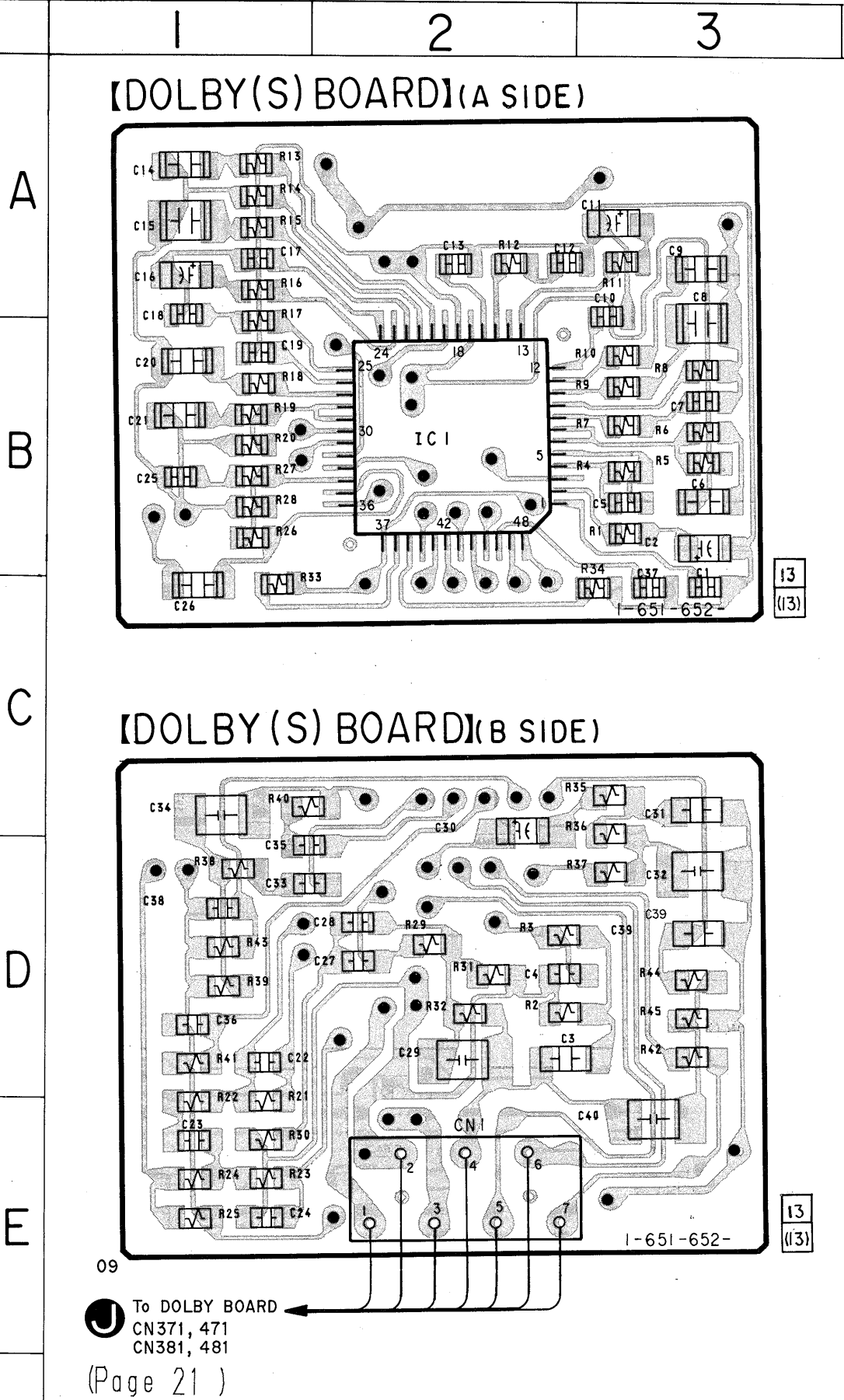
Note:

- All capacitors are in μF unless otherwise noted. $\text{pF}; \mu\text{F}$ 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/10\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
- B+ : B+ Line
- B- : B- Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
no mark : STOP
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$).
Voltage variations may be noted due to normal production tolerances.

4-8. SCHEMATIC DIAGRAM — DOLBY S BLOCK —



4-9. PRINTED WIRING BOARD — DOLBY S BLOCK —
• See page 12 for Circuit Boards Location.





SECTION 5


EXPLODED VIEWS

NOTE:

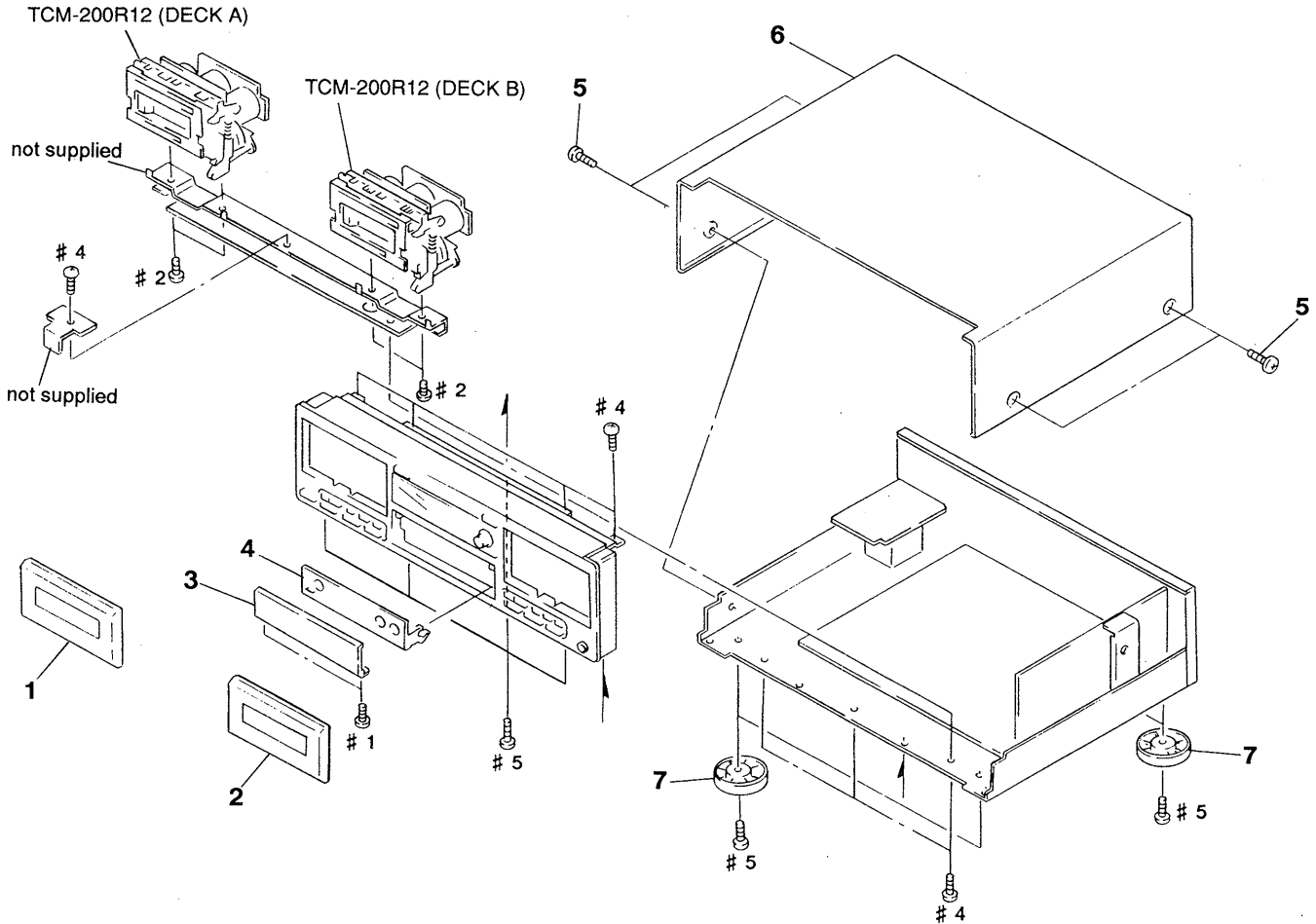
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
CND : Canadian model
AUS : Australian model

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CASE SECTION

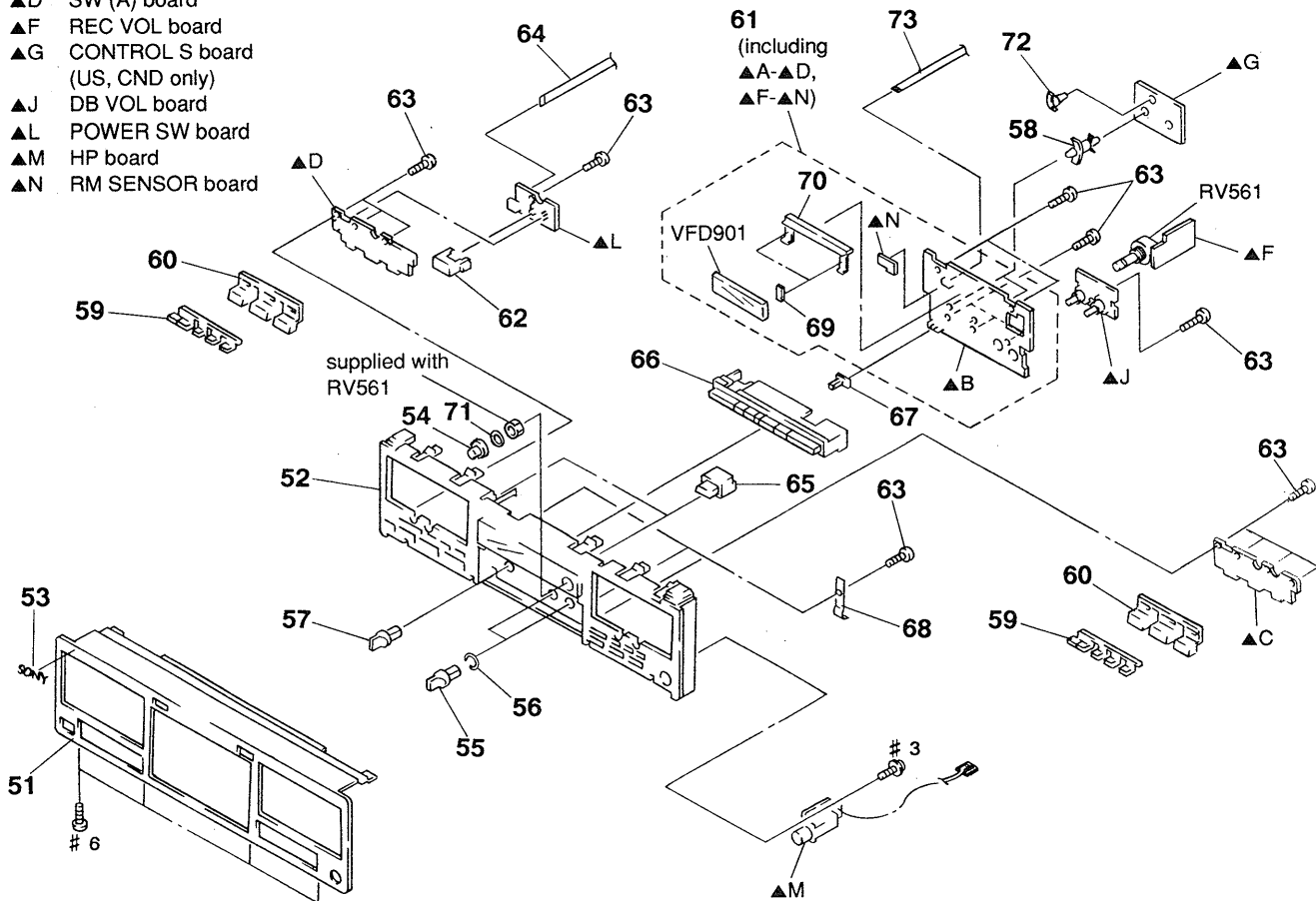


Ref.No.	Part No.	Description
1	X-3370-118-1	LID (A) ASSY, CASSETTE
2	X-3370-119-1	LID (B) ASSY, CASSETTE
3	3-923-143-01	PLATE, ORNAMENTAL
4	3-923-144-01	PLATE (BASE), ORNAMENTAL
5	3-704-366-01	SCREW (CASE) (M3X8)

Remark	Ref.No.	Part No.	Description	Remark
	6	3-919-386-21	CASE	
	7	4-956-885-01	FOOT (F58175S2W) (US, CND)	
	7	4-956-885-11	FOOT (F58175S2W) (E, AUS)	

5-2. FRONT PANEL SECTION

- ▲B PANEL board
- ▲C SW (B) board
- ▲D SW (A) board
- ▲F REC VOL board
- ▲G CONTROL S board
(US, CND only)
- ▲J DB VOL board
- ▲L POWER SW board
- ▲M HP board
- ▲N RM SENSOR board

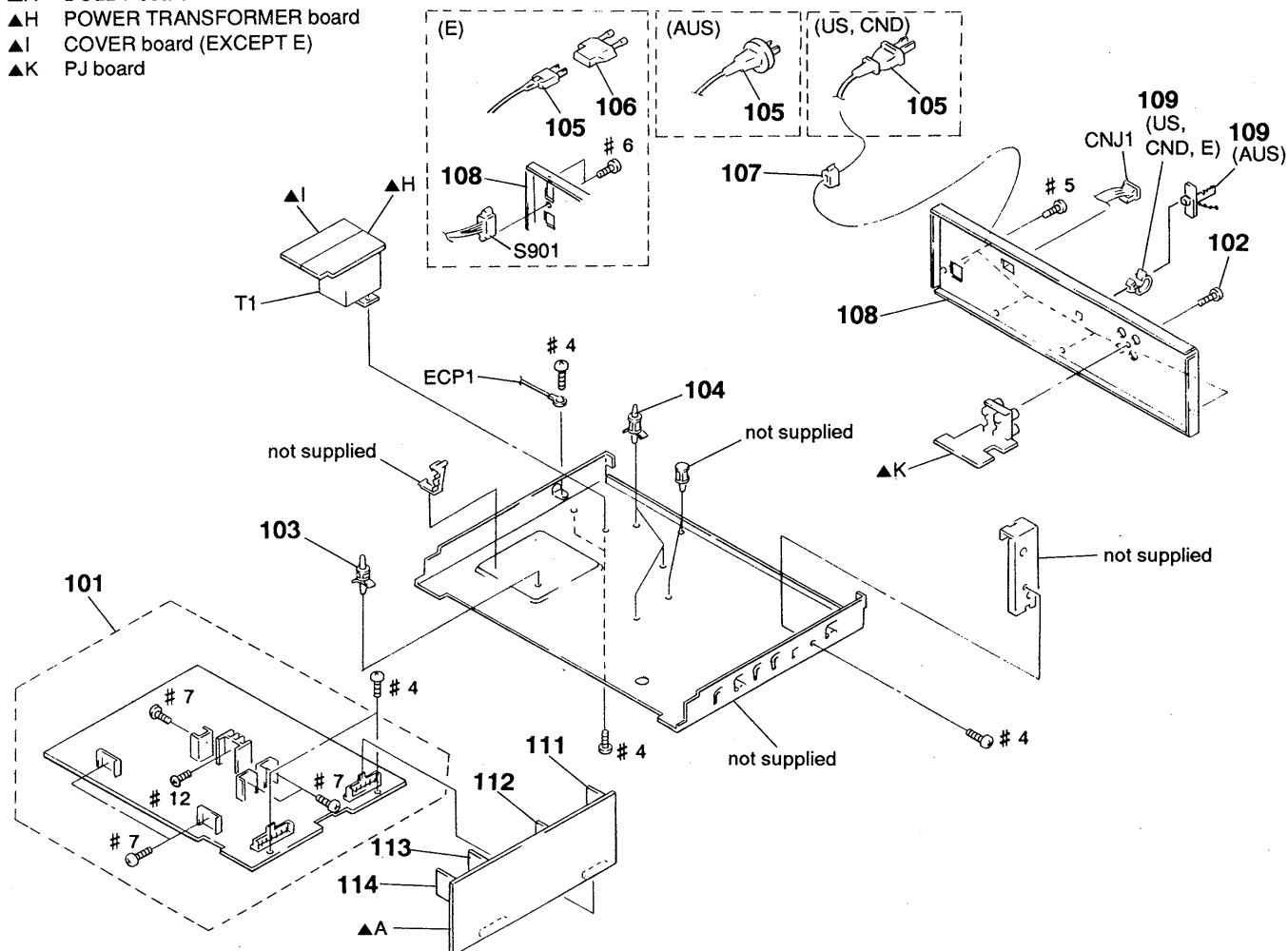




Ref. No.	Part No.	Description
51	3-923-145-01	PANEL, FRONT (US, CND)
51	3-923-145-11	PANEL, FRONT (E, AUS)
52	X-3370-120-1	PANEL (BASE) ASSY
53	4-942-568-01	EMBLEM (NO. 5), SONY
54	3-909-661-11	KNOB (REC)
55	3-350-495-01	KNOB (VOL)
56	3-356-957-01	SPRING
57	3-380-950-01	KNOB (VOL)
* 58	3-350-846-21	HOLDER, PCB (US, CND)
59	3-923-133-01	BUTTON (F-R)
60	3-923-134-01	BUTTON (S-P)
* 61	A-2007-406-A	PANEL BOARD, COMPLETE (US, CND)
* 61	A-2007-407-A	PANEL BOARD, COMPLETE (E)
* 61	A-2007-408-A	PANEL BOARD, COMPLETE (AUS)
62	3-354-932-01	BUTTON (POWER)


Ref. No.	Part No.	Description	Remark
63	4-951-620-01	SCREW (2.6X8), +BVTP	
64	1-575-674-11	WIRE, FLAT TYPE (8 CORE)	
65	3-923-140-01	BUTTON (EJECT)	
66	3-923-146-01	BUTTON (COUNTER)	
67	4-924-444-01	KNOB (TIMER)	
68	3-378-283-01	SPRING (M)	
69	9-911-844-XX	CUSHION	
* 70	3-385-607-01	HOLDER, FL TUBE	
71	3-350-426-02	SPRING	
* 72	3-704-198-11	SUPPORT, PC (US, CND)	
73	1-575-663-31	WIRE, FLAT TYPE (5 CORE)	
RV561	1-223-867-11	RES, VAR, CARBON 50K/50K	
VFD901	1-517-415-11	INDICATOR TUBE, FLUORESCENT	

5-3. CHASSIS SECTION

- ▲A DOLBY board
- ▲H POWER TRANSFORMER board
- ▲I COVER board (EXCEPT E)
- ▲K PJ board

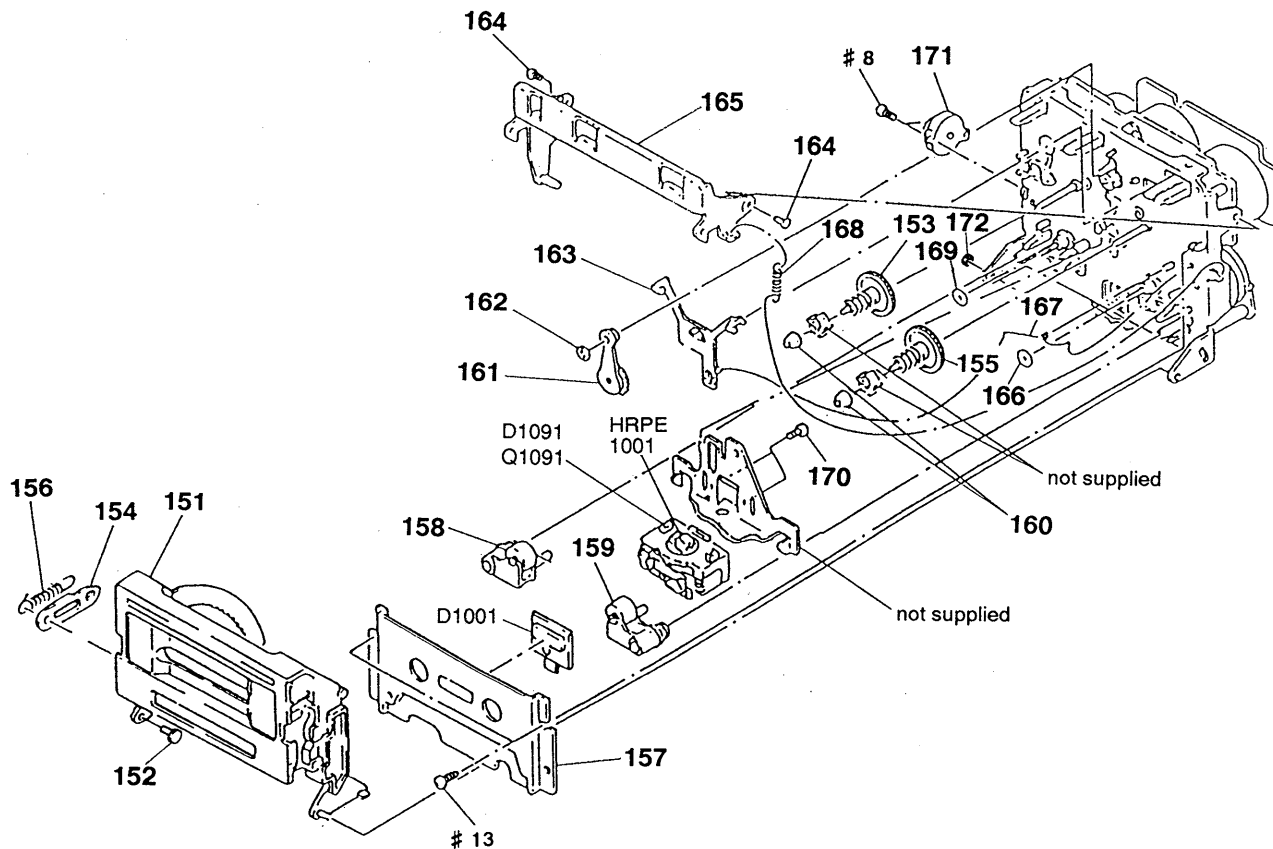


The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-2007-405-A	MAIN BOARD, COMPLETE		* 109	4-949-235-01	HOOK (US, CND, E)	
* 102	3-704-515-01	SCREW (BV/RING)		109	4-956-370-02	BAND, PLUG FIXED (AUS)	
* 103	4-924-098-11	HOLDER, PC BOARD		* 111	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (L-CH DECK-A)	
* 104	3-346-265-11	HOLDER, PC BOARD		* 112	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (R-CH DECK-A)	
▲105	1-551-188-XX	CORD, POWER (E)		* 113	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (L-CH DECK-B)	
▲105	1-590-836-11	CORD, POWER (US, CND)		* 114	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (R-CH DECK-B)	
▲105	1-696-845-11	CORD, POWER (AUS)		* CNJ1	1-558-350-21	CORD (WITH CONNECTOR) (CONTROL S IN)	(US, CND)
▲106	1-569-007-11	ADAPTER, CONVERSION 2P (E)		ECP1	1-765-469-11	LEAD (WITH CONNECTOR)	
* 107	3-703-244-00	BUSHING (2104), CORD (US, CND, AUS)		▲S901	1-570-307-11	SELECTOR, POWER VOLTAGE (E)	
* 107	3-703-571-11	BUSHING (S) (4516), CORD (E)		▲T1	1-427-923-11	TRANSFORMER, POWER (AUS)	
* 108	3-923-147-01	PANEL, BACK (US, CND)		▲T1	1-427-924-11	TRANSFORMER, POWER (US, CND)	
* 108	3-923-147-11	PANEL, BACK (E)		▲T1	1-427-925-11	TRANSFORMER, POWER (E)	
* 108	3-923-147-21	PANEL, BACK (AUS)					

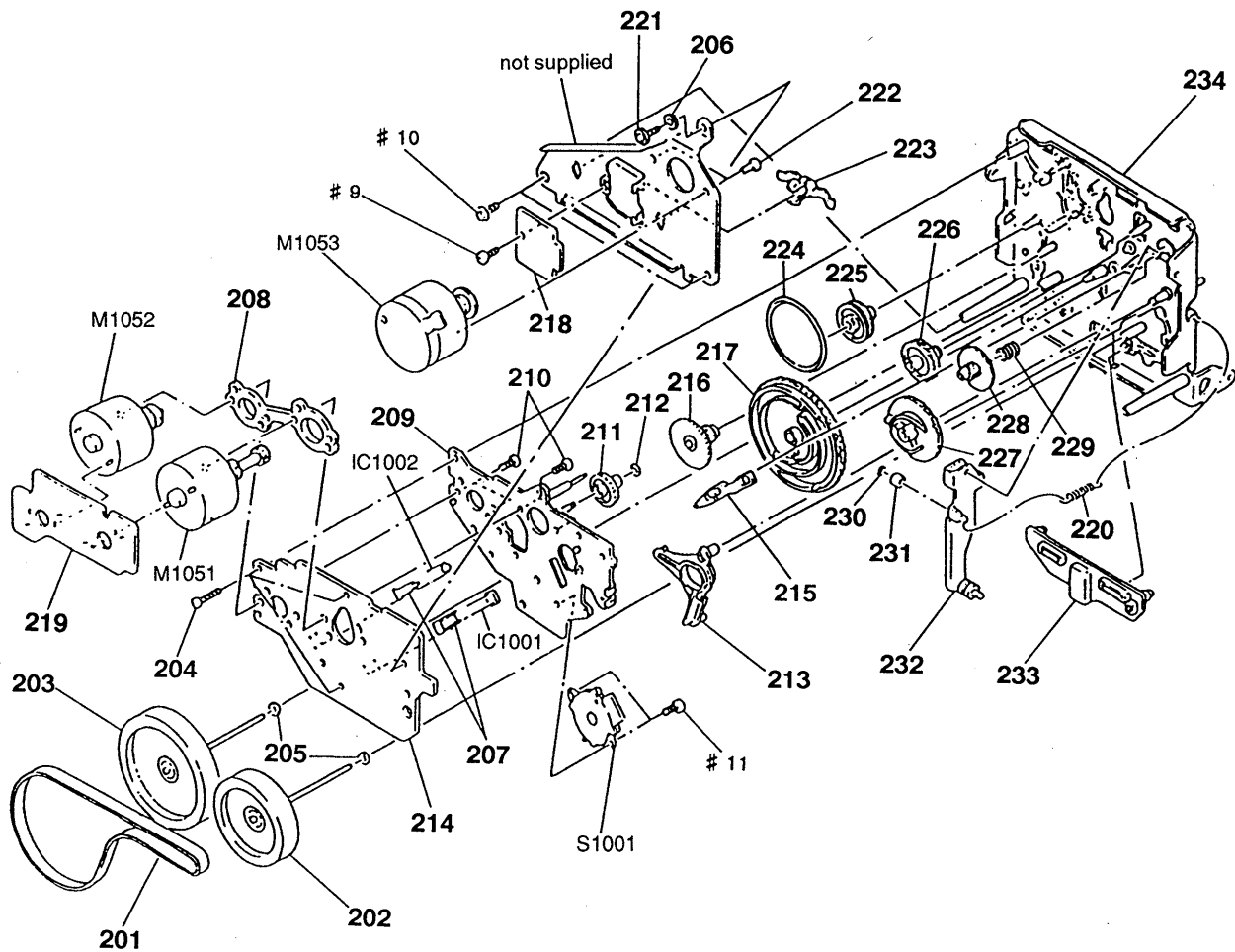
5-4. MECHANISM DECK SECTION-1 (TCM-200R12)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
151	X-3365-299-1	HOLDER (CD-C) ASSY, CASSETTE
152	3-378-341-01	SHAFT (L) (CASSETTE HOLDER)
153	X-3356-628-1	GEAR (S) ASSY
* 154	3-356-717-01	LEVER (JOINT)
155	X-3356-627-1	GEAR (T) ASSY
156	3-356-626-01	SPRING, TENSION
157	X-3356-613-1	PLATE ASSY, ORNAMENTAL
158	X-3343-456-1	LEVER (PINCH R) ASSY
159	X-3343-455-1	LEVER (PINCH F) ASSY
160	3-362-308-01	CAP (REEL)
161	X-3356-641-1	LEVER (FR2) ASSY
162	3-669-465-11	WASHER (1.5), STOPPER
163	3-356-614-01	SLIDER (BRAKE)
164	3-356-601-11	SCREW, STEP

<u>Remark</u>	<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
	* 165	X-3356-608-1	LEVER (LIFTER) ASSY	
	166	3-356-713-01	WASHER	
	167	3-356-619-01	SPRING (B), TORSION	
	168	3-356-625-01	SPRING, TENSION	
	169	3-356-714-01	WASHER	
	170	3-388-848-01	SCREW (P2X6) (B TIGHT)	
	171	3-712-786-01	DAMPER, OIL	
	172	3-558-708-21	WASHER, STOPPER	
	D1001	8-719-980-85	DIODE SLF-325C	
	D1091	8-719-950-74	LED SLR314D-B	
	HRPE1001A	2003-722-A	DECK ASSY, HEAD (REC/PB/ERASE)	
	Q1091	8-729-809-43	TRANSISTOR SPS-314B-BE	

5-5. MECHANISM DECK SECTION-2
(TCM-200R12)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-356-604-01	BELT (CAPSTAN)		221	3-356-707-01	SCREW (+PTPH 2X25)	
202	X-3356-642-1	FLYWHEEL (R FWD) ASSY		222	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
203	X-3356-643-1	FLYWHEEL (R REV) ASSY		223	3-575-321-00	RETAINER, THRUST, CAPSTAN	
204	3-355-801-01	SCREW (BTP 2X18)		224	3-356-603-01	BELT (MODE)	
205	3-356-705-01	WASHER (CAPSTAN)		225	3-356-607-01	PULLEY (MODE)	
* 206	3-356-718-01	SPACER (THRUST RETAINER R)		226	3-356-703-01	GEAR (COMMUNICATION C)	
207	3-356-631-01	HOLDER (SENSOR)		227	3-356-616-01	GEAR (LOADING CAM)	
* 208	3-356-628-01	SPACER (MOTOR)		228	3-356-609-01	GEAR (LOADING)	
* 209	X-3356-602-1	BRACKET (MOTOR R) ASSY		229	3-356-605-01	SPRING, COMPRESSION	
210	3-363-804-01	SCREW (+P 2.6X6.5)		230	3-558-708-11	WASHER, STOPPER	
211	3-356-702-01	GEAR (COMMUNICATION B)		231	3-356-630-01	ROLLER (LOADING)	
212	3-669-465-01	WASHER (1.5), STOPPER		* 232	X-3356-606-1	LEVER (LOADING) ASSY	
213	3-356-613-01	LEVER (MODE)		233	3-356-612-01	SLIDER (REVERSE)	
* 214	1-632-740-11	MD BOARD		234	X-3356-634-1	CHASSIS (R2) COMPLETE ASSY, MECH	
215	3-356-617-01	LEVER (SELECTION)		IC1001	8-749-920-97	PHOTO REFLECTOR GP2S22B	
216	3-356-606-01	GEAR (MODE)		IC1002	8-749-920-97	PHOTO REFLECTOR GP2S22B	
217	3-356-615-01	GEAR (MODE CAM RR)		M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
* 218	1-634-323-11	TRANSLATION BOARD		M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
* 219	1-632-741-21	REEL MOTOR BOARD		M1053	X-3356-605-1	MOTOR (CAPSTAN R) ASSY	
220	3-356-624-01	SPRING, TENSION		S1001	1-466-525-11	ENCODER, ROTARY	

DOLBY (S)**SECTION 6
ELECTRICAL PARTS LIST****NOTE:**

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF: μ F
- COILS
uH: μ H
- Abbreviation
CND : Canadian model
AUS : Australian model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (L-CH DECK-A) *****		C31	1-104-555-11	FILM CHIP 0.022uF 5%	16V
				C32	1-104-563-11	FILM CHIP 0.1uF 5%	16V
*	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (L-CH DECK-B) *****		C33	1-163-024-00	CERAMIC CHIP 0.018uF 10%	50V
				C34	1-104-563-11	FILM CHIP 0.1uF 5%	16V
				C35	1-163-012-00	CERAMIC CHIP 0.0018uF 10%	50V
*	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (R-CH DECK-A) *****		C36	1-165-319-11	CERAMIC CHIP 0.1uF	50V
				C37	1-164-222-11	CERAMIC CHIP 0.22uF	25V
				C38	1-163-024-00	CERAMIC CHIP 0.018uF 10%	50V
*	A-2007-173-A	DOLBY (S) BOARD, COMPLETE (R-CH DECK-B) *****		C39	1-104-555-11	FILM CHIP 0.022uF 5%	16V
				C40	1-104-563-11	FILM CHIP 0.1uF 5%	16V
< CAPACITOR >				< CONNECTOR >			
C1	1-164-222-11	CERAMIC CHIP 0.22uF	25V	CN1	1-695-092-11	SOCKET, CONNECTOR 7P	
C2	1-135-177-21	TANTALUM CHIP 1uF	20% 20V	< IC >			
C3	1-104-558-11	FILM CHIP 0.039uF	5% 16V	IC1	8-752-056-51	IC CXA1417Q	
C4	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	< RESISTOR >			
C5	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	R1	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
C6	1-164-717-11	CERAMIC CHIP 0.0082uF	5% 50V	R2	1-208-806-11	METAL GLAZE 10K 2% 1/10W	
C7	1-164-222-11	CERAMIC CHIP 0.22uF	25V	R3	1-208-812-11	METAL GLAZE 18K 2% 1/10W	
C8	1-104-562-11	FILM CHIP 0.082uF	5% 16V	R4	1-216-119-00	METAL CHIP 820K 5% 1/10W	
C9	1-104-553-11	FILM CHIP 0.015uF	5% 16V	R5	1-208-799-11	METAL GLAZE 5.1K 2% 1/10W	
C10	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R6	1-208-787-11	METAL GLAZE 1.6K 2% 1/10W	
C11	1-135-145-11	TANTALUM CHIP 0.47uF	10% 35V	R7	1-216-657-11	METAL CHIP 1.8K 0.5% 1/10W	
C12	1-164-222-11	CERAMIC CHIP 0.22uF	25V	R8	1-216-667-11	METAL CHIP 4.7K 0.5% 1/10W	
C13	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R9	1-208-791-11	METAL GLAZE 2.4K 2% 1/10W	
C14	1-162-568-11	CERAMIC CHIP 0.33uF	10% 16V	R10	1-216-052-00	METAL CHIP 1.3K 5% 1/10W	
C15	1-104-562-11	FILM CHIP 0.082uF	5% 16V	R11	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
C16	1-135-145-11	TANTALUM CHIP 0.47uF	10% 35V	R12	1-216-619-11	METAL CHIP 47 0.5% 1/10W	
C17	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R13	1-208-784-11	METAL GLAZE 1.2K 2% 1/10W	
C18	1-164-222-11	CERAMIC CHIP 0.22uF	25V	R14	1-216-667-11	METAL CHIP 4.7K 0.5% 1/10W	
C19	1-163-035-00	CERAMIC CHIP 0.047uF	50V	R15	1-208-791-11	METAL GLAZE 2.4K 2% 1/10W	
C20	1-104-553-11	FILM CHIP 0.015uF	5% 16V	R16	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
C21	1-164-717-11	CERAMIC CHIP 0.0082uF	5% 50V	R17	1-216-619-11	METAL CHIP 47 0.5% 1/10W	
C22	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	R18	1-216-657-11	METAL CHIP 1.8K 0.5% 1/10W	
C23	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	R19	1-208-787-11	METAL GLAZE 1.6K 2% 1/10W	
C24	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	R20	1-208-799-11	METAL GLAZE 5.1K 2% 1/10W	
C25	1-163-012-00	CERAMIC CHIP 0.0018uF	10% 50V	R21	1-216-119-00	METAL CHIP 820K 5% 1/10W	
C26	1-104-558-11	FILM CHIP 0.039uF	5% 16V	R22	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
C27	1-163-012-00	CERAMIC CHIP 0.0018uF	10% 50V	R23	1-216-678-11	METAL CHIP 13K 0.5% 1/10W	
C28	1-163-012-00	CERAMIC CHIP 0.0018uF	10% 50V	R24	1-216-673-11	METAL CHIP 8.2K 0.5% 1/10W	
C29	1-104-563-11	FILM CHIP 0.1uF	5% 16V				
C30	1-135-145-11	TANTALUM CHIP 0.47uF	10% 35V				

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R25	1-208-806-11	METAL GLAZE	10K	2%	1/10W	C152	1-162-285-31	CERAMIC	180PF	10%	50V
R26	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	C153	1-130-469-00	MYLAR	680PF	5%	50V
R27	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	C154	1-136-157-00	FILM	0.022uF	5%	50V
R28	1-216-695-11	METAL CHIP	68K	0.5%	1/10W	C155	1-124-273-00	ELECT	3.3uF	20%	50V
R29	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	C156	1-136-158-00	FILM	0.027uF	5%	50V
R30	1-208-791-11	METAL GLAZE	2.4K	2%	1/10W	C191	1-124-925-11	ELECT	2.2uF	20%	100V
R31	1-208-811-11	METAL GLAZE	16K	2%	1/10W	C221	1-136-153-00	FILM	0.01uF	5%	50V
R32	1-216-685-11	METAL CHIP	27K	0.5%	1/10W	C222	1-136-157-00	FILM	0.022uF	5%	50V
R33	1-208-813-11	METAL GLAZE	20K	2%	1/10W	C223	1-136-161-00	FILM	0.047uF	5%	50V
R34	1-216-684-11	METAL CHIP	24K	0.5%	1/10W	C224	1-136-272-00	FILM	68PF	5%	630V
R35	1-208-817-11	METAL GLAZE	30K	2%	1/10W	C225	1-136-433-11	FILM	100PF	5%	630V
R36	1-208-817-11	METAL GLAZE	30K	2%	1/10W	C226	1-130-468-00	MYLAR	560PF	5%	50V
R37	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	C231	1-136-935-11	FILM	22PF	5%	630V
R38	1-208-819-11	METAL GLAZE	36K	2%	1/10W	C232	1-162-285-31	CERAMIC	180PF	10%	50V
R39	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	C233	1-130-469-00	MYLAR	680PF	5%	50V
R40	1-208-817-11	METAL GLAZE	30K	2%	1/10W	C234	1-136-157-00	FILM	0.022uF	5%	50V
R41	1-208-811-11	METAL GLAZE	16K	2%	1/10W	C235	1-124-273-00	ELECT	3.3uF	20%	50V
R42	1-216-673-11	METAL CHIP	8.2K	0.5%	1/10W	C236	1-136-158-00	FILM	0.027uF	5%	50V
R43	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	C237	1-110-341-11	MYLAR	330PF	5%	50V
R44	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	C241	1-136-153-00	FILM	0.01uF	5%	50V
R45	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	C242	1-136-157-00	FILM	0.022uF	5%	50V
*****						C243	1-136-161-00	FILM	0.047uF	5%	50V
*****						C244	1-136-272-00	FILM	68PF	5%	630V
*****						C245	1-136-433-11	FILM	100PF	5%	630V
*****						C246	1-130-468-00	MYLAR	560PF	5%	50V
*****						C251	1-136-935-11	FILM	22PF	5%	630V
*****						C252	1-162-285-31	CERAMIC	180PF	10%	50V
*****						C253	1-130-469-00	MYLAR	680PF	5%	50V
*****						C254	1-136-157-00	FILM	0.022uF	5%	50V
*****						C255	1-124-273-00	ELECT	3.3uF	20%	50V
*****						C256	1-136-158-00	FILM	0.027uF	5%	50V
*****						C291	1-124-925-11	ELECT	2.2uF	20%	100V
*****						C303	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C304	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C305	1-130-475-00	MYLAR	0.0022uF	5%	50V
*****						C307	1-136-172-00	FILM	0.39uF	5%	50V
*****						C353	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C354	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C355	1-130-475-00	MYLAR	0.0022uF	5%	50V
*****						C357	1-136-172-00	FILM	0.39uF	5%	50V
*****						C403	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C404	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C405	1-130-475-00	MYLAR	0.0022uF	5%	50V
*****						C407	1-136-172-00	FILM	0.39uF	5%	50V
*****						C453	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C454	1-126-963-11	ELECT	4.7uF	20%	50V
*****						C455	1-130-475-00	MYLAR	0.0022uF	5%	50V
*****						C457	1-136-172-00	FILM	0.39uF	5%	50V
*****						C521	1-124-925-11	ELECT	2.2uF	20%	100V
*****						C522	1-124-902-00	ELECT	0.47uF	20%	50V

* A-2007-405-A MAIN BOARD, COMPLETE

7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3

7-682-548-04 SCREW +BVTT 3X8 (S)

< CAPACITOR >

C121	1-136-153-00	FILM	0.01uF	5%	50V
C122	1-136-157-00	FILM	0.022uF	5%	50V
C123	1-136-161-00	FILM	0.047uF	5%	50V
C124	1-136-272-00	FILM	68PF	5%	630V
C125	1-136-433-11	FILM	100PF	5%	630V
C126	1-130-468-00	MYLAR	560PF	5%	50V
C131	1-136-935-11	FILM	22PF	5%	630V
C132	1-162-285-31	CERAMIC	180PF	10%	50V
C133	1-130-469-00	MYLAR	680PF	5%	50V
C134	1-136-157-00	FILM	0.022uF	5%	50V
C135	1-124-273-00	ELECT	3.3uF	20%	50V
C136	1-136-158-00	FILM	0.027uF	5%	50V
C137	1-110-341-11	MYLAR	330PF	5%	50V
C141	1-136-153-00	FILM	0.01uF	5%	50V
C142	1-136-157-00	FILM	0.022uF	5%	50V
C143	1-136-161-00	FILM	0.047uF	5%	50V
C144	1-136-272-00	FILM	68PF	5%	630V
C145	1-136-433-11	FILM	100PF	5%	630V
C146	1-130-468-00	MYLAR	560PF	5%	50V
C151	1-136-935-11	FILM	22PF	5%	630V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C523	1-136-230-00	FILM	0. 0022uF 5% 100V	C802	1-164-159-11	CERAMIC	0. 1uF 50V
C524	1-136-230-00	FILM	0. 0022uF 5% 100V	C803	1-124-925-11	ELECT	2. 2uF 20% 100V
C525	1-130-856-00	FILM	0. 0068uF 5% 100V	C804	1-126-963-11	ELECT	4. 7uF 20% 50V
C526	1-124-907-11	ELECT	10uF 20% 50V	C805	1-124-443-00	ELECT	100uF 20% 10V
C527	1-136-558-11	FILM	0. 0039uF 5% 630V	C806	1-164-159-11	CERAMIC	0. 1uF 50V
C528	1-124-120-11	ELECT	220uF 20% 25V	C807	1-164-159-11	CERAMIC	0. 1uF 50V
C529	1-104-664-11	ELECT	47uF 20% 16V	C808	1-124-443-00	ELECT	100uF 20% 10V
C530	1-107-585-11	CERAMIC	5PF 0. 25PF 500V	C810	1-164-159-11	CERAMIC	0. 1uF 50V
C535	1-124-472-11	ELECT	470uF 20% 10V	C811	1-164-159-11	CERAMIC	0. 1uF 50V
C536	1-124-472-11	ELECT	470uF 20% 10V	C817	1-164-159-11	CERAMIC	0. 1uF 50V
C541	1-124-925-11	ELECT	2. 2uF 20% 100V	C818	1-162-302-11	CERAMIC	0. 0022uF 20% 16V
C542	1-124-902-00	ELECT	0. 47uF 20% 50V	C819	1-164-159-11	CERAMIC	0. 1uF 50V
C543	1-136-230-00	FILM	0. 0022uF 5% 100V	C820	1-162-294-31	CERAMIC	0. 001uF 10% 50V
C544	1-136-230-00	FILM	0. 0022uF 5% 100V	C821	1-162-294-31	CERAMIC	0. 001uF 10% 50V
C545	1-130-856-00	FILM	0. 0068uF 5% 100V	C824	1-162-294-31	CERAMIC	0. 001uF 10% 50V
C546	1-124-907-11	ELECT	10uF 20% 50V	C831	1-126-963-11	ELECT	4. 7uF 20% 50V
C547	1-136-558-11	FILM	0. 0039uF 5% 630V	C832	1-104-664-11	ELECT	47uF 20% 16V
C548	1-124-120-11	ELECT	220uF 20% 25V	C833	1-130-479-00	MYLAR	0. 0047uF 5% 50V
C549	1-104-664-11	ELECT	47uF 20% 16V	C841	1-126-963-11	ELECT	4. 7uF 20% 50V
C550	1-107-585-11	CERAMIC	5PF 0. 25PF 500V	C842	1-104-664-11	ELECT	47uF 20% 16V
C555	1-124-472-11	ELECT	470uF 20% 10V	C843	1-130-479-00	MYLAR	0. 0047uF 5% 50V
C556	1-124-472-11	ELECT	470uF 20% 10V	C851	1-124-907-11	ELECT	10uF 20% 50V
C581	1-124-925-11	ELECT	2. 2uF 20% 100V	C871	1-164-159-11	CERAMIC	0. 1uF 50V
C582	1-162-217-31	CERAMIC	56PF 5% 50V	C872	1-164-159-11	CERAMIC	0. 1uF 50V
C583	1-136-157-00	FILM	0. 022uF 5% 50V	C881	1-164-159-11	CERAMIC	0. 1uF 50V
C585	1-162-286-31	CERAMIC	220PF 10% 50V	C882	1-164-159-11	CERAMIC	0. 1uF 50V
C586	1-124-925-11	ELECT	2. 2uF 20% 100V	C898	1-124-443-00	ELECT	100uF 20% 10V
C587	1-124-925-11	ELECT	2. 2uF 20% 100V	C899	1-164-159-11	CERAMIC	0. 1uF 50V
C601	1-124-903-11	ELECT	1uF 20% 50V	< CONNECTOR >			
C651	1-124-903-11	ELECT	1uF 20% 50V	* CN531	1-564-512-11	PLUG, CONNECTOR 9P	
C701	1-126-963-11	ELECT	4. 7uF 20% 50V	CN701	1-766-272-11	PIN, CONNECTOR (PC BOARD) 10P	
C702	1-124-772-11	ELECT	10000uF 20% 25V	* CN801	1-564-339-61	PIN, CONNECTOR 5P	
C703	1-104-664-11	ELECT	47uF 20% 16V	CN802	1-750-410-11	CONNECTOR, FFC/FPC 5P	
C704	1-126-937-11	ELECT	4700uF 20% 16V	CN804	1-750-413-11	CONNECTOR, FFC/FPC 8P	
C705	1-126-937-11	ELECT	4700uF 20% 16V	* CN805	1-564-338-71	PIN, CONNECTOR 4P	
C706	1-124-443-00	ELECT	100uF 20% 10V	CN810	1-506-468-11	PIN, CONNECTOR 3P	
C707	1-126-916-11	ELECT	1000uF 20% 6. 3V	* CN811	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P	
C708	1-124-911-11	ELECT	220uF 20% 50V	CNP601	1-764-821-11	CONNECTOR, BOARD TO BOARD 15P	
C709	1-124-910-11	ELECT	47uF 20% 50V	CNP602	1-764-821-11	CONNECTOR, BOARD TO BOARD 15P	
C710	1-126-963-11	ELECT	4. 7uF 20% 50V	< COMPOSITION CIRCUIT BLOCK >			
C751	1-126-937-11	ELECT	4700uF 20% 16V	CP521	1-232-946-11	COMPOSITION CIRCUIT BLOCK	
C752	1-126-937-11	ELECT	4700uF 20% 16V	CP541	1-232-946-11	COMPOSITION CIRCUIT BLOCK	
C753	1-124-120-11	ELECT	220uF 20% 25V	CP801	1-239-059-11	COMPOSITION CIRCUIT BLOCK	
C754	1-124-120-11	ELECT	220uF 20% 25V	CP802	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
C755	1-124-910-11	ELECT	47uF 20% 50V	CP803	1-233-347-11	CIRCUIT BLOCK, COMPOSITION	
C756	1-162-286-31	CERAMIC	220PF 10% 50V	CP804	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
C757	1-162-286-31	CERAMIC	220PF 10% 50V				
C758	1-124-473-11	ELECT	1000uF 20% 10V				
C759	1-124-473-11	ELECT	1000uF 20% 10V				
C801	1-164-159-11	CERAMIC	0. 1uF 50V				

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
< DIODE >				< IC >			
D191	8-719-987-63	DIODE 1N4148M		IC502	8-759-100-96	IC uPC4558G2	
D192	8-719-987-63	DIODE 1N4148M		IC503	8-759-602-01	IC M5220P	
D193	8-719-933-33	DIODE HZS6A1L		IC504	8-759-602-01	IC M5220P	
D291	8-719-987-63	DIODE 1N4148M		IC506	8-759-300-71	IC HD14053BFP	
D292	8-719-987-63	DIODE 1N4148M		IC507	8-759-009-06	IC MC14052BF	
D293	8-719-933-33	DIODE HZS6A1L		IC508	8-759-100-96	IC uPC4558G2	
D521	8-719-987-63	DIODE 1N4148M		IC521	8-759-106-56	IC uPC1297CA	
D522	8-719-987-63	DIODE 1N4148M		IC522	8-759-032-11	IC MC74HC04AF	
D541	8-719-987-63	DIODE 1N4148M		IC523	8-759-009-06	IC MC14052BF	
D542	8-719-987-63	DIODE 1N4148M		IC541	8-759-106-56	IC uPC1297CA	
D601	8-719-987-63	DIODE 1N4148M		IC542	8-759-032-11	IC MC74HC04AF	
D602	8-719-987-63	DIODE 1N4148M		IC543	8-759-009-06	IC MC14052BF	
D651	8-719-987-63	DIODE 1N4148M		IC601	8-752-072-16	IC CXA1598M-T6	
D652	8-719-987-63	DIODE 1N4148M		IC602	8-752-072-16	IC CXA1598M-T6	
D701	8-719-200-77	DIODE 10E2N		IC603	8-759-009-05	IC MC14051BF	
D702	8-719-500-36	DIODE D2SB20		IC801	8-759-337-49	IC uPD78043AGF-023-3B9	
D703	8-719-987-63	DIODE 1N4148M		IC802	8-759-337-50	IC M38002M2-185FP	
D704	8-719-001-54	DIODE UZL-11H2		IC805	8-759-973-95	IC BA6219B	
D705	8-719-200-77	DIODE 10E2N		IC806	8-759-822-09	IC LB1641	
D706	8-719-933-41	DIODE HZS6C3L		IC807	8-759-973-95	IC BA6219B	
D707	8-719-987-63	DIODE 1N4148M		IC808	8-759-822-09	IC LB1641	
D708	8-719-933-38	DIODE HZS6B3L		IC809	8-759-165-82	IC PST600E-T	
D709	8-719-987-63	DIODE 1N4148M		IC810	8-759-248-67	IC AT24C01-10SC	
D710	8-719-987-63	DIODE 1N4148M		< COIL >			
D751	8-719-200-77	DIODE 10E2N		L131	1-410-780-11	INDUCTOR 27mH	
D752	8-719-200-77	DIODE 10E2N		L151	1-410-780-11	INDUCTOR 27mH	
D753	8-719-200-77	DIODE 10E2N		L231	1-410-780-11	INDUCTOR 27mH	
D754	8-719-200-77	DIODE 10E2N		L251	1-410-780-11	INDUCTOR 27mH	
D755	8-719-987-63	DIODE 1N4148M		< TRANSISTOR >			
D756	8-719-987-63	DIODE 1N4148M		Q131	8-729-620-05	TRANSISTOR 2SC2603-EF	
D757	8-719-933-33	DIODE HZS6A1L		Q132	8-729-620-05	TRANSISTOR 2SC2603-EF	
D758	8-719-987-63	DIODE 1N4148M		Q151	8-729-620-05	TRANSISTOR 2SC2603-EF	
D759	8-719-933-33	DIODE HZS6A1L		Q231	8-729-620-05	TRANSISTOR 2SC2603-EF	
D801	8-719-987-63	DIODE 1N4148M		Q232	8-729-620-05	TRANSISTOR 2SC2603-EF	
D802	8-719-987-63	DIODE 1N4148M		Q251	8-729-620-05	TRANSISTOR 2SC2603-EF	
D831	8-719-987-63	DIODE 1N4148M		Q302	8-729-620-05	TRANSISTOR 2SC2603-EF	
D841	8-719-987-63	DIODE 1N4148M		Q352	8-729-620-05	TRANSISTOR 2SC2603-EF	
D851	8-719-987-63	DIODE 1N4148M		Q402	8-729-620-05	TRANSISTOR 2SC2603-EF	
D891	8-719-987-63	DIODE 1N4148M		Q452	8-729-620-05	TRANSISTOR 2SC2603-EF	
D892	8-719-987-63	DIODE 1N4148M		Q523	8-729-900-80	TRANSISTOR DTC114ES	
D893	8-719-987-63	DIODE 1N4148M		Q524	8-729-900-89	TRANSISTOR DTC114ES	
< HEAT SINK >				Q527	8-729-119-76	TRANSISTOR 2SA1175-HFE	
* HS705	3-309-144-21	HEAT SINK (Q705)		Q528	8-729-142-46	TRANSISTOR 2SC2001-LK	
* HS752	4-880-403-11	HEAT SINK (Q752)		Q529	8-729-142-46	TRANSISTOR 2SC2001-LK	
* HS755	4-880-403-11	HEAT SINK (Q755)		Q543	8-729-900-80	TRANSISTOR DTC114ES	
* HS805	3-356-925-01	HEAT SINK (IC805)		Q544	8-729-900-89	TRANSISTOR DTC114ES	
* HS807	3-356-925-01	HEAT SINK (IC807)		Q547	8-729-119-76	TRANSISTOR 2SA1175-HFE	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q548	8-729-142-46	TRANSISTOR	2SC2001-LK	< RESISTOR >			
Q549	8-729-142-46	TRANSISTOR	2SC2001-LK	R121	1-249-429-11	CARBON	10K 5% 1/4W
Q581	8-729-900-89	TRANSISTOR	DTC144ES	R122	1-249-435-11	CARBON	33K 5% 1/4W
Q602	8-729-900-89	TRANSISTOR	DTC144ES	△R123	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q603	8-729-900-89	TRANSISTOR	DTC144ES	R124	1-247-883-00	CARBON	150K 5% 1/4W
Q604	8-729-620-05	TRANSISTOR	2SC2603-EF	R131	1-249-428-11	CARBON	8. 2K 5% 1/4W F
Q605	8-729-900-89	TRANSISTOR	DTC144ES	R132	1-249-433-11	CARBON	22K 5% 1/4W
Q606	8-729-900-89	TRANSISTOR	DTC144ES	R133	1-249-403-11	CARBON	68 5% 1/4W F
Q651	8-729-900-89	TRANSISTOR	DTC144ES	R134	1-247-882-11	CARBON	130K 5% 1/4W
Q652	8-729-900-89	TRANSISTOR	DTC144ES	R135	1-249-426-11	CARBON	5. 6K 5% 1/4W
Q653	8-729-900-89	TRANSISTOR	DTC144ES	R136	1-249-420-11	CARBON	1. 8K 5% 1/4W F
Q654	8-729-900-89	TRANSISTOR	DTC144ES	R137	1-247-840-00	CARBON	2. 4K 5% 1/4W
Q701	8-729-620-05	TRANSISTOR	2SC2603-EF	R139	1-249-425-11	CARBON	4. 7K 5% 1/4W F
Q702	8-729-141-83	TRANSISTOR	2SB1094-LK	R140	1-249-421-11	CARBON	2. 2K 5% 1/4W F
Q703	8-729-141-30	TRANSISTOR	2SC3623A-LK	R141	1-249-429-11	CARBON	10K 5% 1/4W
Q704	8-729-620-05	TRANSISTOR	2SC2603-EF	R142	1-249-435-11	CARBON	33K 5% 1/4W
Q705	8-729-019-01	TRANSISTOR	2SD2394-EF	R143	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q706	8-729-119-76	TRANSISTOR	2SA1175-HFE	R144	1-247-883-00	CARBON	150K 5% 1/4W
Q707	8-729-140-04	TRANSISTOR	2SB1116A-L	R151	1-249-428-11	CARBON	8. 2K 5% 1/4W F
Q751	8-729-620-05	TRANSISTOR	2SC2603-EF	R152	1-249-433-11	CARBON	22K 5% 1/4W
Q752	8-729-141-83	TRANSISTOR	2SB1094-LK	R153	1-249-403-11	CARBON	68 5% 1/4W F
Q753	8-729-620-05	TRANSISTOR	2SC2603-EF	R154	1-247-882-11	CARBON	130K 5% 1/4W
Q754	8-729-119-76	TRANSISTOR	2SA1175-HFE	R155	1-249-426-11	CARBON	5. 6K 5% 1/4W
Q755	8-729-209-15	TRANSISTOR	2SD2012	R156	1-249-420-11	CARBON	1. 8K 5% 1/4W F
Q756	8-729-119-76	TRANSISTOR	2SA1175-HFE	R157	1-247-840-00	CARBON	2. 4K 5% 1/4W
Q757	8-729-119-76	TRANSISTOR	2SA1175-HFE	R159	1-249-425-11	CARBON	4. 7K 5% 1/4W F
Q803	8-729-900-89	TRANSISTOR	DTC144ES	R160	1-249-421-11	CARBON	2. 2K 5% 1/4W F
Q804	8-729-119-76	TRANSISTOR	2SA1175-HFE	R191	1-247-874-11	CARBON	62K 5% 1/4W
Q806	8-729-900-65	TRANSISTOR	DTA144ES	R192	1-249-410-11	CARBON	270 5% 1/4W F
Q831	8-729-620-05	TRANSISTOR	2SC2603-EF	R193	1-249-417-11	CARBON	1K 5% 1/4W F
Q832	8-729-620-05	TRANSISTOR	2SC2603-EF	R194	1-247-807-31	CARBON	100 5% 1/4W
Q841	8-729-620-05	TRANSISTOR	2SC2603-EF	R221	1-249-429-11	CARBON	10K 5% 1/4W
Q842	8-729-620-05	TRANSISTOR	2SC2603-EF	R222	1-249-435-11	CARBON	33K 5% 1/4W
Q871	8-729-900-65	TRANSISTOR	DTA144ES	△R223	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q872	8-729-900-89	TRANSISTOR	DTC144ES	R224	1-247-883-00	CARBON	150K 5% 1/4W
Q873	8-729-900-80	TRANSISTOR	DTC114ES	R231	1-249-428-11	CARBON	8. 2K 5% 1/4W F
Q874	8-729-900-80	TRANSISTOR	DTC114ES	R232	1-249-433-11	CARBON	22K 5% 1/4W
Q875	8-729-900-80	TRANSISTOR	DTC114ES	R233	1-249-403-11	CARBON	68 5% 1/4W F
Q876	8-729-900-65	TRANSISTOR	DTA144ES	R234	1-247-882-11	CARBON	130K 5% 1/4W
Q877	8-729-900-89	TRANSISTOR	DTC144ES	R235	1-249-426-11	CARBON	5. 6K 5% 1/4W
Q881	8-729-900-65	TRANSISTOR	DTA144ES	R236	1-249-420-11	CARBON	1. 8K 5% 1/4W F
Q882	8-729-900-89	TRANSISTOR	DTC144ES	R237	1-247-840-00	CARBON	2. 4K 5% 1/4W
Q883	8-729-900-80	TRANSISTOR	DTC114ES	R239	1-249-425-11	CARBON	4. 7K 5% 1/4W F
Q884	8-729-900-80	TRANSISTOR	DTC114ES	R240	1-249-421-11	CARBON	2. 2K 5% 1/4W F
Q885	8-729-900-80	TRANSISTOR	DTC114ES	R241	1-249-429-11	CARBON	10K 5% 1/4W
Q893	8-729-900-80	TRANSISTOR	DTC114ES	R242	1-249-435-11	CARBON	33K 5% 1/4W
Q894	8-729-801-84	TRANSISTOR	2SB1013-4	R243	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q895	8-729-801-84	TRANSISTOR	2SB1013-4	R244	1-247-883-00	CARBON	150K 5% 1/4W
Q973	8-729-900-65	TRANSISTOR	DTA144ES	R251	1-249-428-11	CARBON	8. 2K 5% 1/4W F
Q974	8-729-900-89	TRANSISTOR	DTC144ES	R252	1-249-433-11	CARBON	22K 5% 1/4W

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R253	1-249-403-11	CARBON	68	5%	1/4W	F	R552	1-249-389-11	CARBON	4.7	5%	1/4W	F
R254	1-247-882-11	CARBON	130K	5%	1/4W		R571	1-249-434-11	CARBON	27K	5%	1/4W	
R255	1-249-426-11	CARBON	5.6K	5%	1/4W		R572	1-249-434-11	CARBON	27K	5%	1/4W	
R256	1-249-420-11	CARBON	1.8K	5%	1/4W	F	R573	1-249-434-11	CARBON	27K	5%	1/4W	
R257	1-247-840-00	CARBON	2.4K	5%	1/4W		R574	1-249-434-11	CARBON	27K	5%	1/4W	
R259	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R575	1-247-874-11	CARBON	62K	5%	1/4W	
R260	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R576	1-247-866-11	CARBON	30K	5%	1/4W	
R291	1-247-874-11	CARBON	62K	5%	1/4W		R577	1-249-431-11	CARBON	15K	5%	1/4W	
R292	1-249-410-11	CARBON	270	5%	1/4W	F	R578	1-247-852-11	CARBON	7.5K	5%	1/4W	
R293	1-249-417-11	CARBON	1K	5%	1/4W	F	R579	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R294	1-247-807-31	CARBON	100	5%	1/4W		R581	1-249-434-11	CARBON	27K	5%	1/4W	
R301	1-249-429-11	CARBON	10K	5%	1/4W		R582	1-249-434-11	CARBON	27K	5%	1/4W	
R304	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R583	1-249-434-11	CARBON	27K	5%	1/4W	
R305	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R584	1-249-434-11	CARBON	27K	5%	1/4W	
R307	1-249-427-11	CARBON	6.8K	5%	1/4W	F	R585	1-247-874-11	CARBON	62K	5%	1/4W	
R308	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R586	1-247-866-11	CARBON	30K	5%	1/4W	
R351	1-249-429-11	CARBON	10K	5%	1/4W		R587	1-249-431-11	CARBON	15K	5%	1/4W	
R354	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R588	1-247-852-11	CARBON	7.5K	5%	1/4W	
R355	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R589	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R357	1-249-427-11	CARBON	6.8K	5%	1/4W	F	R601	1-249-433-11	CARBON	22K	5%	1/4W	
R358	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R602	1-249-417-11	CARBON	1K	5%	1/4W	F
R401	1-249-429-11	CARBON	10K	5%	1/4W		R603	1-215-455-00	METAL	27K	1%	1/4W	
R404	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R604	1-249-433-11	CARBON	22K	5%	1/4W	
R405	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R605	1-249-429-11	CARBON	10K	5%	1/4W	
R407	1-249-427-11	CARBON	6.8K	5%	1/4W	F	R606	1-249-433-11	CARBON	22K	5%	1/4W	
R408	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R607	1-249-433-11	CARBON	22K	5%	1/4W	
R451	1-249-429-11	CARBON	10K	5%	1/4W		R608	1-249-433-11	CARBON	22K	5%	1/4W	
R454	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R609	1-249-433-11	CARBON	22K	5%	1/4W	
R455	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R610	1-249-433-11	CARBON	22K	5%	1/4W	
R457	1-249-427-11	CARBON	6.8K	5%	1/4W	F	R621	1-249-436-11	CARBON	39K	5%	1/4W	
R458	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R622	1-247-874-11	CARBON	62K	5%	1/4W	
R521	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R623	1-247-866-11	CARBON	30K	5%	1/4W	
R524	1-249-441-11	CARBON	100K	5%	1/4W		R624	1-249-435-11	CARBON	33K	5%	1/4W	
R525	1-247-844-11	CARBON	3.6K	5%	1/4W		R625	1-249-437-11	CARBON	47K	5%	1/4W	
R526	1-249-431-11	CARBON	15K	5%	1/4W		R626	1-247-864-11	CARBON	24K	5%	1/4W	
R527	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R631	1-247-866-11	CARBON	30K	5%	1/4W	
R528	1-249-429-11	CARBON	10K	5%	1/4W		R632	1-247-868-11	CARBON	36K	5%	1/4W	
R529	1-249-437-11	CARBON	47K	5%	1/4W		R633	1-249-429-11	CARBON	10K	5%	1/4W	
R530	1-249-437-11	CARBON	47K	5%	1/4W		R634	1-249-433-11	CARBON	22K	5%	1/4W	
R531	1-249-389-11	CARBON	4.7	5%	1/4W	F	R635	1-247-876-11	CARBON	75K	5%	1/4W	
R532	1-249-389-11	CARBON	4.7	5%	1/4W	F	R636	1-249-432-11	CARBON	18K	5%	1/4W	
R541	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R641	1-249-434-11	CARBON	27K	5%	1/4W	
R544	1-249-441-11	CARBON	100K	5%	1/4W		R642	1-247-864-11	CARBON	24K	5%	1/4W	
R545	1-247-844-11	CARBON	3.6K	5%	1/4W		R643	1-249-437-11	CARBON	47K	5%	1/4W	
R546	1-249-431-11	CARBON	15K	5%	1/4W		R644	1-249-437-11	CARBON	47K	5%	1/4W	
R547	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R645	1-247-866-11	CARBON	30K	5%	1/4W	
R548	1-249-429-11	CARBON	10K	5%	1/4W		R646	1-249-440-11	CARBON	82K	5%	1/4W	
R549	1-249-437-11	CARBON	47K	5%	1/4W		R651	1-249-433-11	CARBON	22K	5%	1/4W	
R550	1-249-437-11	CARBON	47K	5%	1/4W		R652	1-249-417-11	CARBON	1K	5%	1/4W	F
R551	1-249-389-11	CARBON	4.7	5%	1/4W	F	R653	1-215-455-00	METAL	27K	1%	1/4W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R655	1-249-439-11	CARBON	68K 5% 1/4W	△R720	1-219-139-11	FUSIBLE	0.68 10% 1/4W
R656	1-249-429-11	CARBON	10K 5% 1/4W	△R721	1-219-136-11	FUSIBLE	0.22 10% 1/4W
R657	1-249-433-11	CARBON	22K 5% 1/4W	R751	1-249-433-11	CARBON	22K 5% 1/4W
R658	1-249-433-11	CARBON	22K 5% 1/4W	R752	1-249-421-11	CARBON	2.2K 5% 1/4W F
R662	1-247-868-11	CARBON	36K 5% 1/4W	R753	1-249-421-11	CARBON	2.2K 5% 1/4W F
R663	1-249-440-11	CARBON	82K 5% 1/4W	R754	1-249-421-11	CARBON	2.2K 5% 1/4W F
R664	1-249-440-11	CARBON	82K 5% 1/4W	R755	1-249-421-11	CARBON	2.2K 5% 1/4W F
R665	1-249-432-11	CARBON	18K 5% 1/4W	R756	1-249-417-11	CARBON	1K 5% 1/4W F
R666	1-249-432-11	CARBON	18K 5% 1/4W	R757	1-249-417-11	CARBON	1K 5% 1/4W F
R667	1-249-439-11	CARBON	68K 5% 1/4W	R758	1-249-417-11	CARBON	1K 5% 1/4W F
R668	1-249-434-11	CARBON	27K 5% 1/4W	R759	1-249-415-11	CARBON	680 5% 1/4W F
R669	1-247-870-11	CARBON	43K 5% 1/4W	R760	1-249-422-11	CARBON	2.7K 5% 1/4W F
R670	1-249-437-11	CARBON	47K 5% 1/4W	R761	1-249-424-11	CARBON	3.9K 5% 1/4W F
R671	1-249-432-11	CARBON	18K 5% 1/4W	R762	1-249-423-11	CARBON	3.3K 5% 1/4W F
R672	1-249-432-11	CARBON	18K 5% 1/4W	R763	1-247-807-31	CARBON	100 5% 1/4W
R673	1-249-438-11	CARBON	56K 5% 1/4W	R770	1-249-417-11	CARBON	1K 5% 1/4W F
R674	1-247-864-11	CARBON	24K 5% 1/4W	R781	1-247-887-00	CARBON	220K 5% 1/4W
R675	1-249-436-11	CARBON	39K 5% 1/4W	R782	1-249-425-11	CARBON	4.7K 5% 1/4W F
R676	1-247-874-11	CARBON	62K 5% 1/4W	R783	1-249-437-11	CARBON	47K 5% 1/4W
R677	1-249-431-11	CARBON	15K 5% 1/4W	R784	1-249-428-11	CARBON	8.2K 5% 1/4W F
R678	1-249-431-11	CARBON	15K 5% 1/4W	R785	1-249-441-11	CARBON	100K 5% 1/4W
R679	1-249-438-11	CARBON	56K 5% 1/4W	R786	1-249-423-11	CARBON	3.3K 5% 1/4W F
R681	1-249-436-11	CARBON	39K 5% 1/4W	R787	1-249-421-11	CARBON	2.2K 5% 1/4W F
R682	1-247-874-11	CARBON	62K 5% 1/4W	R788	1-249-441-11	CARBON	100K 5% 1/4W
R683	1-247-866-11	CARBON	30K 5% 1/4W	R801	1-249-422-11	CARBON	2.7K 5% 1/4W F
R684	1-249-435-11	CARBON	33K 5% 1/4W	R802	1-247-834-11	CARBON	1.3K 5% 1/4W
R685	1-249-437-11	CARBON	47K 5% 1/4W	R803	1-249-441-11	CARBON	100K 5% 1/4W
R686	1-247-864-11	CARBON	24K 5% 1/4W	R804	1-249-425-11	CARBON	4.7K 5% 1/4W F
R687	1-247-866-11	CARBON	30K 5% 1/4W	R805	1-249-429-11	CARBON	10K 5% 1/4W
R688	1-247-868-11	CARBON	36K 5% 1/4W	R806	1-249-425-11	CARBON	4.7K 5% 1/4W F
R689	1-247-856-00	CARBON	11K 5% 1/4W	R807	1-249-429-11	CARBON	10K 5% 1/4W
R690	1-249-433-11	CARBON	22K 5% 1/4W	R808	1-247-850-11	CARBON	6.2K 5% 1/4W
R691	1-247-876-11	CARBON	75K 5% 1/4W	R809	1-249-425-11	CARBON	4.7K 5% 1/4W F
R692	1-249-432-11	CARBON	18K 5% 1/4W	R810	1-249-429-11	CARBON	10K 5% 1/4W
R693	1-249-434-11	CARBON	27K 5% 1/4W	R811	1-249-425-11	CARBON	4.7K 5% 1/4W F
R694	1-247-864-11	CARBON	24K 5% 1/4W	R812	1-249-429-11	CARBON	10K 5% 1/4W
R695	1-249-437-11	CARBON	47K 5% 1/4W	R813	1-249-433-11	CARBON	22K 5% 1/4W
R696	1-249-437-11	CARBON	47K 5% 1/4W	R814	1-249-433-11	CARBON	22K 5% 1/4W
R697	1-249-434-11	CARBON	27K 5% 1/4W	R815	1-249-556-11	CARBON	1.5K 5% 1/4W
R698	1-249-440-11	CARBON	82K 5% 1/4W	R816	1-249-422-11	CARBON	2.7K 5% 1/4W F
R701	1-249-433-11	CARBON	22K 5% 1/4W	R817	1-247-834-11	CARBON	1.3K 5% 1/4W
R702	1-249-421-11	CARBON	2.2K 5% 1/4W F	R818	1-249-425-11	CARBON	4.7K 5% 1/4W F
△R703	1-219-136-11	FUSIBLE	0.22 10% 1/4W	R819	1-249-433-11	CARBON	22K 5% 1/4W
△R704	1-219-136-11	FUSIBLE	0.22 10% 1/4W	R821	1-247-850-11	CARBON	6.2K 5% 1/4W
R705	1-249-422-11	CARBON	2.7K 5% 1/4W F	R822	1-249-429-11	CARBON	10K 5% 1/4W
R706	1-249-421-11	CARBON	2.2K 5% 1/4W F	R823	1-249-425-11	CARBON	4.7K 5% 1/4W F
R707	1-247-840-00	CARBON	2.4K 5% 1/4W	R824	1-249-425-11	CARBON	4.7K 5% 1/4W F
R708	1-249-430-11	CARBON	12K 5% 1/4W	R825	1-249-425-11	CARBON	4.7K 5% 1/4W F
R709	1-249-430-11	CARBON	12K 5% 1/4W	R827	1-249-437-11	CARBON	47K 5% 1/4W
R710	1-249-436-11	CARBON	39K 5% 1/4W	R828	1-249-417-11	CARBON	1K 5% 1/4W F

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R829	1-249-441-11	CARBON	100K 5% 1/4W	R896	1-249-417-11	CARBON	1K 5% 1/4W F
R830	1-249-429-11	CARBON	10K 5% 1/4W	R897	1-247-807-31	CARBON	100 5% 1/4W
R831	1-249-429-11	CARBON	10K 5% 1/4W	R898	1-247-807-31	CARBON	100 5% 1/4W
R832	1-249-433-11	CARBON	22K 5% 1/4W	R899	1-247-807-31	CARBON	100 5% 1/4W
R833	1-249-429-11	CARBON	10K 5% 1/4W	R937	1-249-433-11	CARBON	22K 5% 1/4W
R834	1-249-421-11	CARBON	2.2K 5% 1/4W F	R941	1-249-433-11	CARBON	22K 5% 1/4W
R835	1-249-429-11	CARBON	10K 5% 1/4W	R942	1-249-427-11	CARBON	6.8K 5% 1/4W F
R836	1-249-417-11	CARBON	1K 5% 1/4W F	R943	1-249-433-11	CARBON	22K 5% 1/4W
R837	1-249-412-11	CARBON	390 5% 1/4W F	R945	1-249-429-11	CARBON	10K 5% 1/4W
R838	1-249-421-11	CARBON	2.2K 5% 1/4W F	R946	1-249-429-11	CARBON	10K 5% 1/4W
R839	1-249-417-11	CARBON	1K 5% 1/4W F	R948	1-249-433-11	CARBON	22K 5% 1/4W
R841	1-249-429-11	CARBON	10K 5% 1/4W	R955	1-247-895-00	CARBON	470K 5% 1/4W
R842	1-249-433-11	CARBON	22K 5% 1/4W	R956	1-247-895-00	CARBON	470K 5% 1/4W
R843	1-249-429-11	CARBON	10K 5% 1/4W	R957	1-249-436-11	CARBON	39K 5% 1/4W
R844	1-249-421-11	CARBON	2.2K 5% 1/4W F	R958	1-249-436-11	CARBON	39K 5% 1/4W
R845	1-249-429-11	CARBON	10K 5% 1/4W	R964	1-249-436-11	CARBON	39K 5% 1/4W
R846	1-249-417-11	CARBON	1K 5% 1/4W F	R965	1-247-895-00	CARBON	470K 5% 1/4W
R847	1-249-412-11	CARBON	390 5% 1/4W F	R966	1-247-895-00	CARBON	470K 5% 1/4W
R851	1-249-422-11	CARBON	2.7K 5% 1/4W F	R967	1-249-436-11	CARBON	39K 5% 1/4W
R852	1-247-718-11	CARBON	2.7K 5% 1/4W F	R970	1-249-425-11	CARBON	4.7K 5% 1/4W F
R853	1-249-422-11	CARBON	2.7K 5% 1/4W F	R977	1-249-425-11	CARBON	4.7K 5% 1/4W F
R854	1-249-422-11	CARBON	2.7K 5% 1/4W F	R978	1-249-425-11	CARBON	4.7K 5% 1/4W F
R855	1-249-422-11	CARBON	2.7K 5% 1/4W F	R979	1-249-425-11	CARBON	4.7K 5% 1/4W F
R863	1-249-421-11	CARBON	2.2K 5% 1/4W F	R980	1-249-425-11	CARBON	4.7K 5% 1/4W F
R864	1-249-421-11	CARBON	2.2K 5% 1/4W F	R989	1-249-425-11	CARBON	4.7K 5% 1/4W F
R871	1-249-433-11	CARBON	22K 5% 1/4W	R990	1-249-425-11	CARBON	4.7K 5% 1/4W F
R872	1-247-864-11	CARBON	24K 5% 1/4W	R999	1-249-425-11	CARBON	4.7K 5% 1/4W F
R873	1-249-411-11	CARBON	330 5% 1/4W	R1012	1-247-807-31	CARBON	100 5% 1/4W
R874	1-247-830-11	CARBON	910 5% 1/4W	R1013	1-247-807-31	CARBON	100 5% 1/4W
R875	1-249-418-11	CARBON	1.2K 5% 1/4W F	R1014	1-247-807-31	CARBON	100 5% 1/4W
R876	1-249-417-11	CARBON	1K 5% 1/4W F	R1015	1-247-807-31	CARBON	100 5% 1/4W
△R877	1-212-950-00	FUSIBLE	4.7 5% 1/2W F	R1016	1-247-807-31	CARBON	100 5% 1/4W
R878	1-249-416-11	CARBON	820 5% 1/4W F	R1017	1-247-807-31	CARBON	100 5% 1/4W
R879	1-249-419-11	CARBON	1.5K 5% 1/4W F	R1018	1-247-807-31	CARBON	100 5% 1/4W
R880	1-249-417-11	CARBON	1K 5% 1/4W F	R1019	1-247-807-31	CARBON	100 5% 1/4W
△R881	1-212-950-00	FUSIBLE	4.7 5% 1/2W F	R1022	1-247-807-31	CARBON	100 5% 1/4W
R882	1-249-433-11	CARBON	22K 5% 1/4W	R1023	1-247-807-31	CARBON	100 5% 1/4W
R883	1-247-864-11	CARBON	24K 5% 1/4W	R1024	1-247-807-31	CARBON	100 5% 1/4W
R884	1-249-411-11	CARBON	330 5% 1/4W	R1025	1-247-807-31	CARBON	100 5% 1/4W
R885	1-247-830-11	CARBON	910 5% 1/4W	R1026	1-247-807-31	CARBON	100 5% 1/4W
R886	1-249-418-11	CARBON	1.2K 5% 1/4W F	R1027	1-247-807-31	CARBON	100 5% 1/4W
R887	1-249-417-11	CARBON	1K 5% 1/4W F	R1028	1-247-807-31	CARBON	100 5% 1/4W
△R888	1-212-950-00	FUSIBLE	4.7 5% 1/2W F	R1029	1-247-807-31	CARBON	100 5% 1/4W
R889	1-249-416-11	CARBON	820 5% 1/4W F	R1401	1-249-421-11	CARBON	2.2K 5% 1/4W F
R890	1-249-419-11	CARBON	1.5K 5% 1/4W F	R2401	1-249-421-11	CARBON	2.2K 5% 1/4W F
R891	1-249-417-11	CARBON	1K 5% 1/4W F				
△R892	1-212-950-00	FUSIBLE	4.7 5% 1/2W F				
R893	1-249-433-11	CARBON	22K 5% 1/4W				
R894	1-249-433-11	CARBON	22K 5% 1/4W				
R895	1-249-441-11	CARBON	100K 5% 1/4W				

< VARIABLE RESISTOR >

RV121 1-238-601-11 RES, ADJ, CARBON 22K
RV131 1-238-600-11 RES, ADJ, CARBON 10K
RV141 1-238-601-11 RES, ADJ, CARBON 22K

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

MD

PANEL

Consisting the following section in the panel.
 (CONTROL S/COVER/DB VOL/DOLBY/HP/PJ/POWER SW/
 POWER TRANSFORMER/REC VOL/RM SENSOR/SW (A)/SW (B))

Ref. No.	Part No.	Description	Remark
RV151	1-238-600-11	RES, ADJ, CARBON 10K	
RV221	1-238-601-11	RES, ADJ, CARBON 22K	
RV231	1-238-600-11	RES, ADJ, CARBON 10K	
RV241	1-238-601-11	RES, ADJ, CARBON 22K	
RV251	1-238-600-11	RES, ADJ, CARBON 10K	
RV301	1-238-600-11	RES, ADJ, CARBON 10K	
RV302	1-238-602-11	RES, ADJ, CARBON 47K	
RV351	1-238-600-11	RES, ADJ, CARBON 10K	
RV352	1-238-602-11	RES, ADJ, CARBON 47K	
RV401	1-238-600-11	RES, ADJ, CARBON 10K	
RV402	1-238-602-11	RES, ADJ, CARBON 47K	
RV451	1-238-600-11	RES, ADJ, CARBON 10K	
RV452	1-238-602-11	RES, ADJ, CARBON 47K	
RV831	1-238-602-11	RES, ADJ, CARBON 47K	
RV841	1-238-602-11	RES, ADJ, CARBON 47K	
RV871	1-238-600-11	RES, ADJ, CARBON 10K	
RV872	1-238-600-11	RES, ADJ, CARBON 10K	
RV881	1-238-600-11	RES, ADJ, CARBON 10K	
RV882	1-238-600-11	RES, ADJ, CARBON 10K	
RV891	1-238-600-11	RES, ADJ, CARBON 10K	
< RELAY >			
RY531	1-755-061-11	RELAY	
RY551	1-755-061-11	RELAY	
< TRANSFORMER >			
T121	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T141	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T221	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T241	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T521	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T541	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
< TEST PIN >			
* TP521	1-564-506-11	PLUG, CONNECTOR 3P	
* TP541	1-564-506-11	PLUG, CONNECTOR 3P	
* TP581	1-564-506-11	PLUG, CONNECTOR 3P	
* TP801	1-564-505-11	PLUG, CONNECTOR 2P	
* TP802	1-564-505-11	PLUG, CONNECTOR 2P	
* TP803	1-564-505-11	PLUG, CONNECTOR 2P	
< VIBRATOR >			
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X802	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

Ref. No.	Part No.	Description	Remark
*	1-632-740-11	MD BOARD *****	
	3-356-631-01	HOLDER (SENSOR)	
< CONNECTOR >			
CN1001	1-506-615-11	PIN, CONNECTOR 9P	
* CN1002	1-564-502-11	PIN, CONNECTOR 10P	
< IC >			
IC1001	8-749-920-97	PHOTO REFLECTOR GP2S22B	
IC1002	8-749-920-97	PHOTO REFLECTOR GP2S22B	
< RESISTOR >			
R1001	1-249-408-11	CARBON 180 5% 1/4W F	
R1002	1-249-408-11	CARBON 180 5% 1/4W F	
< SWITCH >			
S1001	1-466-525-11	ENCODER, ROTARY	
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)	
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)	
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)	
S1005	1-572-125-11	SWITCH, LEAF (FWD TAB)	
S1006	1-572-202-11	SWITCH, LEAF (HALF)	
S1007	1-572-125-11	SWITCH, LEAF (METAL)	
S1008	1-572-125-11	SWITCH, LEAF (70u)	
S1009	1-572-125-11	SWITCH, LEAF (REV TAB)	
< TERMINAL >			
* TB1001	1-694-018-11	TERMINAL (5P) (ROTARY ENCODER)	

*	A-2007-406-A	PANEL BOARD, COMPLETE (US, CND) *****	
*	A-2007-407-A	PANEL BOARD, COMPLETE (E) *****	
*	A-2007-408-A	PANEL BOARD, COMPLETE (AUS) ***** (Including CONTROL S, COVER, DB VOL, DOLBY, HP, PJ, POWER SW, POWER TRANSFORMER, REC VOL, RM SENSOR, SW (A), SW (B) BOARD)	
	9-911-844-XX	CUSHION	
*	3-385-607-01	HOLDER, FL TUBE	
< CAPACITOR >			
C51	1-126-963-11	ELECT 4.7uF 20% 50V	
C52	1-126-963-11	ELECT 4.7uF 20% 50V	
C53	1-126-963-11	ELECT 4.7uF 20% 50V	
C54	1-126-963-11	ELECT 4.7uF 20% 50V	

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
C55	1-163-014-00	CERAMIC CHIP	0.0027uF	5%	50V	C492	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C56	1-104-562-11	FILM CHIP	0.082uF	5%	16V	C561	1-124-471-00	ELECT	1000uF	20%	6.3V
C57	1-104-559-11	FILM CHIP	0.047uF	5%	16V	C562	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C58	1-164-693-11	CERAMIC CHIP	0.0018uF	5%	50V	C571	1-104-666-11	ELECT	220uF	20%	10V
C71	1-104-664-11	ELECT	47uF	20%	10V	C572	1-104-666-11	ELECT	220uF	20%	10V
C72	1-104-664-11	ELECT	47uF	20%	10V	C901	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C75	1-124-903-11	ELECT	1uF	20%	50V	C902	1-124-443-00	ELECT	100uF	20%	10V
C81	1-104-664-11	ELECT	47uF	20%	10V	C903	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C82	1-104-664-11	ELECT	47uF	20%	10V	C910	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C111	1-124-907-11	ELECT	10uF	20%	50V	C911	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C181	1-124-768-11	ELECT	4.7uF	20%	50V	C912	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C211	1-124-907-11	ELECT	10uF	20%	50V	C996	1-165-319-11	CERAMIC CHIP	0.1uF		50V (US, CND)
C281	1-124-768-11	ELECT	4.7uF	20%	50V	C997	1-136-169-00	FILM	0.22uF	5%	50V
C371	1-126-963-11	ELECT	4.7uF	20%	50V	C998	1-136-169-00	FILM	0.22uF	5%	50V
C372	1-124-907-11	ELECT	10uF	20%	50V	C999	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C373	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V	< CONNECTOR >					
C375	1-126-963-11	ELECT	4.7uF	20%	50V	* CN73	1-568-955-11	PIN, CONNECTOR	6P		
C376	1-104-561-11	FILM CHIP	0.068uF	5%	16V	CN74	1-506-468-11	PIN, CONNECTOR	3P		
C377	1-104-563-11	FILM CHIP	0.1uF	5%	16V	* CN75	1-564-706-11	PIN, CONNECTOR (SMALL TYPE)	4P		
C378	1-124-768-11	ELECT	4.7uF	20%	50V	* CN76	1-568-944-11	PIN, CONNECTOR	6P		
C379	1-124-907-11	ELECT	10uF	20%	50V	CN371	1-695-087-11	PIN, CONNECTOR (PC BOARD)	7P		
C380	1-124-916-11	ELECT	22uF	20%	63V	CN381	1-695-087-11	PIN, CONNECTOR (PC BOARD)	7P		
C381	1-126-963-11	ELECT	4.7uF	20%	50V	CN471	1-695-087-11	PIN, CONNECTOR (PC BOARD)	7P		
C382	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	CN481	1-695-087-11	PIN, CONNECTOR (PC BOARD)	7P		
C385	1-126-963-11	ELECT	4.7uF	20%	50V	CN560	1-506-468-11	PIN, CONNECTOR	3P		
C386	1-104-561-11	FILM CHIP	0.068uF	5%	16V	* CN562	1-564-337-00	PIN, CONNECTOR	3P		
C387	1-104-563-11	FILM CHIP	0.1uF	5%	16V	CN563	1-506-468-11	PIN, CONNECTOR	3P		
C388	1-124-768-11	ELECT	4.7uF	20%	50V	CN571	1-506-468-11	PIN, CONNECTOR	3P		
C389	1-124-907-11	ELECT	10uF	20%	50V	CN572	1-770-889-11	CONNECTOR (FFC)	8P		
C390	1-124-916-11	ELECT	22uF	20%	63V	* CN702	1-580-230-31	PIN, CONNECTOR (PC BOARD)	2P(US, CND, AUS)		
C391	1-126-963-11	ELECT	4.7uF	20%	50V	CN901	1-770-679-11	CONNECTOR (FFC)	5P		
C392	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	CN902	1-565-951-11	SOCKET, CONNECTOR (PC BOARD)	4P (US, CND)		
C471	1-126-963-11	ELECT	4.7uF	20%	50V	CN903	1-506-469-11	PIN, CONNECTOR	4P (US, CND)		
C472	1-124-907-11	ELECT	10uF	20%	50V	CN904	1-573-105-11	CONNECTOR, PC BOARD	4P		
C473	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V	* CN905	1-691-007-11	CONNECTOR, PC BOARD (PLUG)	4P		
C475	1-126-963-11	ELECT	4.7uF	20%	50V	CN906	1-573-105-11	CONNECTOR, PC BOARD	4P		
C476	1-104-561-11	FILM CHIP	0.068uF	5%	16V	* CN907	1-573-107-11	CONNECTOR, PC BOARD (PLUG)	4P		
C477	1-104-563-11	FILM CHIP	0.1uF	5%	16V	CNP71	1-764-814-11	CONNECTOR, BOARD TO BOARD	15P		
C478	1-124-768-11	ELECT	4.7uF	20%	50V	CNP72	1-764-814-11	CONNECTOR, BOARD TO BOARD	15P		
C479	1-124-907-11	ELECT	10uF	20%	50V	< DIODE >					
C480	1-124-916-11	ELECT	22uF	20%	63V	D51	8-719-200-02	DIODE	10E2		
C481	1-126-963-11	ELECT	4.7uF	20%	50V	D52	8-719-200-02	DIODE	10E2		
C482	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	D53	8-719-200-02	DIODE	10E2		
C485	1-126-963-11	ELECT	4.7uF	20%	50V	D54	8-719-200-02	DIODE	10E2		
C486	1-104-561-11	FILM CHIP	0.068uF	5%	16V	D55	8-719-988-62	DIODE	1SS355		
C487	1-104-563-11	FILM CHIP	0.1uF	5%	16V						
C488	1-124-768-11	ELECT	4.7uF	20%	50V						
C489	1-124-907-11	ELECT	10uF	20%	50V						
C490	1-124-916-11	ELECT	22uF	20%	63V						
C491	1-126-963-11	ELECT	4.7uF	20%	50V						

PANEL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D56	8-719-988-62	DIODE 1SS355		Q904	8-729-805-65	TRANSISTOR 2SA1344	
D61	8-719-988-62	DIODE 1SS355		Q905	8-729-805-65	TRANSISTOR 2SA1344	
D561	8-719-988-62	DIODE 1SS355		Q906	8-729-805-65	TRANSISTOR 2SA1344	
D1031	8-719-988-62	DIODE 1SS355 (US, CND)		Q907	8-729-805-65	TRANSISTOR 2SA1344	
D1032	8-719-988-62	DIODE 1SS355 (US, CND)		Q908	8-729-805-65	TRANSISTOR 2SA1344	
< LEAD >				Q909	8-729-805-65	TRANSISTOR 2SA1344	
ECP1	1-765-469-11	LEAD (WITH CONNECTOR)		Q910	8-729-805-65	TRANSISTOR 2SA1344	
< IC >				Q911	8-729-805-65	TRANSISTOR 2SA1344	
IC51	8-759-636-55	IC M5218AFP		< RESISTOR >			
IC52	8-759-009-06	IC MC14052BF		R51	1-216-081-00	METAL CHIP 22K 5% 1/10W	
IC53	8-759-300-71	IC HD14053BFP		R52	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
IC54	8-759-100-96	IC uPC4558G2		R53	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
IC56	8-759-636-55	IC M5218AFP		R54	1-216-097-00	METAL CHIP 100K 5% 1/10W	
IC57	8-759-100-96	IC uPC4558G2		R55	1-216-097-00	METAL CHIP 100K 5% 1/10W	
IC58	8-759-009-06	IC MC14052BF		R56	1-208-797-11	METAL GLAZE 4.3K 2% 1/10W	
IC59	8-759-636-55	IC M5218AFP		R57	1-216-097-00	METAL CHIP 100K 5% 1/10W	
IC60	8-759-281-42	IC TC9210P		R58	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
IC71	8-752-066-36	IC CXA1563M		R59	1-216-073-00	METAL CHIP 10K 5% 1/10W	
IC81	8-752-066-36	IC CXA1563M		R60	1-216-073-00	METAL CHIP 10K 5% 1/10W	
IC804	8-759-008-79	IC MC14011BF (US, CND)		△R61	1-247-696-11	CARBON 47 5% 1/4W F	
IC901	8-759-337-51	IC M38122M2-103FP		△R62	1-249-401-11	CARBON 47 5% 1/4W F	
IC902	8-749-923-80	IC GPIU90XB		R63	1-216-089-00	METAL CHIP 47K 5% 1/10W	
< JACK >				R64	1-216-095-00	METAL CHIP 82K 5% 1/10W	
J501	1-568-519-41	JACK, LARGE TYPE (PHONES)		R65	1-216-089-00	METAL CHIP 47K 5% 1/10W	
< FILTER >				R66	1-216-089-00	METAL CHIP 47K 5% 1/10W	
LPF371	1-236-147-11	FILTER, LOW PASS		R71	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
LPF471	1-236-147-11	FILTER, LOW PASS		R73	1-216-081-00	METAL CHIP 22K 5% 1/10W	
< JACK >				R81	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
PJ561	1-573-070-11	JACK, PIN 4P (LINE IN/OUT)		R83	1-216-081-00	METAL CHIP 22K 5% 1/10W	
< TRANSISTOR >				R85	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
Q51	8-729-107-43	TRANSISTOR 2SC3624-L18		R86	1-216-081-00	METAL CHIP 22K 5% 1/10W	
Q52	8-729-107-43	TRANSISTOR 2SC3624-L18		R111	1-216-083-00	METAL CHIP 27K 5% 1/10W	
Q86	8-729-805-45	TRANSISTOR 2SC3395		R112	1-216-083-00	METAL CHIP 27K 5% 1/10W	
Q111	8-729-107-43	TRANSISTOR 2SC3624-L18		R113	1-216-089-00	METAL CHIP 47K 5% 1/10W	
Q161	8-729-922-37	TRANSISTOR 2SD2144S-UVW		R114	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
Q211	8-729-107-43	TRANSISTOR 2SC3624-L18		R115	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
Q261	8-729-922-37	TRANSISTOR 2SD2144S-UVW		R116	1-216-089-00	METAL CHIP 47K 5% 1/10W	
Q371	8-729-805-41	TRANSISTOR 2SC3398		R117	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
Q471	8-729-805-41	TRANSISTOR 2SC3398		R161	1-216-081-00	METAL CHIP 22K 5% 1/10W	
Q561	8-729-901-06	TRANSISTOR DTA144EK		R162	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
Q562	8-729-216-22	TRANSISTOR 2SA1162-G		R163	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
Q901	8-729-805-65	TRANSISTOR 2SA1344		R164	1-216-089-00	METAL CHIP 47K 5% 1/10W	
Q902	8-729-805-65	TRANSISTOR 2SA1344		R165	1-216-083-00	METAL CHIP 27K 5% 1/10W	
Q903	8-729-805-65	TRANSISTOR 2SA1344		R171	1-216-097-00	METAL CHIP 100K 5% 1/10W	
				R172	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
				R173	1-216-079-00	METAL CHIP 18K 5% 1/10W	
				R174	1-216-033-00	METAL CHIP 220 5% 1/10W	
				R181	1-216-073-00	METAL CHIP 10K 5% 1/10W	
				R182	1-216-684-11	METAL CHIP 24K 0.5% 1/10W	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R183	1-216-097-00	METAL CHIP	100K	5%	1/10W	R910	1-216-097-00	METAL CHIP	100K	5%	1/10W
R184	1-216-077-00	METAL CHIP	15K	5%	1/10W	R911	1-216-097-00	METAL CHIP	100K	5%	1/10W
R185	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	R912	1-216-097-00	METAL CHIP	100K	5%	1/10W
R186	1-216-097-00	METAL CHIP	100K	5%	1/10W	R913	1-216-097-00	METAL CHIP	100K	5%	1/10W
R211	1-216-083-00	METAL CHIP	27K	5%	1/10W	R914	1-216-073-00	METAL CHIP	10K	5%	1/10W
R212	1-216-083-00	METAL CHIP	27K	5%	1/10W	R915	1-216-097-00	METAL CHIP	100K	5%	1/10W
R213	1-216-089-00	METAL CHIP	47K	5%	1/10W	R916	1-216-073-00	METAL CHIP	10K	5%	1/10W
R214	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R917	1-216-073-00	METAL CHIP	10K	5%	1/10W
R215	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R918	1-216-073-00	METAL CHIP	10K	5%	1/10W
R216	1-216-089-00	METAL CHIP	47K	5%	1/10W	R919	1-216-073-00	METAL CHIP	10K	5%	1/10W
R217	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R920	1-216-097-00	METAL CHIP	100K	5%	1/10W
R261	1-216-081-00	METAL CHIP	22K	5%	1/10W	R921	1-216-097-00	METAL CHIP	100K	5%	1/10W
R262	1-216-049-91	METAL GLAZE	1K	5%	1/10W	R922	1-216-025-91	METAL GLAZE	100	5%	1/10W
R263	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R923	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R264	1-216-089-00	METAL CHIP	47K	5%	1/10W	R925	1-216-097-00	METAL CHIP	100K	5%	1/10W
R265	1-216-083-00	METAL CHIP	27K	5%	1/10W	R926	1-216-097-00	METAL CHIP	100K	5%	1/10W
R271	1-216-097-00	METAL CHIP	100K	5%	1/10W	R927	1-216-097-00	METAL CHIP	100K	5%	1/10W
R272	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R928	1-216-097-00	METAL CHIP	100K	5%	1/10W
R273	1-216-079-00	METAL CHIP	18K	5%	1/10W	R931	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R274	1-216-033-00	METAL CHIP	220	5%	1/10W	R938	1-216-077-00	METAL CHIP	15K	5%	1/10W
R281	1-216-073-00	METAL CHIP	10K	5%	1/10W	R939	1-216-089-00	METAL CHIP	47K	5%	1/10W
R282	1-216-684-11	METAL CHIP	24K	0.5%	1/10W	R940	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R283	1-216-097-00	METAL CHIP	100K	5%	1/10W	R951	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R284	1-216-077-00	METAL CHIP	15K	5%	1/10W	R952	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R285	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	R953	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R286	1-216-097-00	METAL CHIP	100K	5%	1/10W	R954	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R371	1-216-097-00	METAL CHIP	100K	5%	1/10W	R959	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R372	1-216-097-00	METAL CHIP	100K	5%	1/10W	R960	1-216-077-00	METAL CHIP	15K	5%	1/10W
R373	1-216-073-00	METAL CHIP	10K	5%	1/10W	R961	1-216-089-00	METAL CHIP	47K	5%	1/10W
R374	1-216-079-00	METAL CHIP	18K	5%	1/10W	R962	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R375	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R963	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R376	1-216-097-00	METAL CHIP	100K	5%	1/10W	R968	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R377	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	R969	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R471	1-216-097-00	METAL CHIP	100K	5%	1/10W	R971	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R472	1-216-097-00	METAL CHIP	100K	5%	1/10W	R972	1-216-077-00	METAL CHIP	15K	5%	1/10W
R473	1-216-073-00	METAL CHIP	10K	5%	1/10W	R973	1-216-089-00	METAL CHIP	47K	5%	1/10W
R474	1-216-079-00	METAL CHIP	18K	5%	1/10W	R974	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R475	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R975	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R476	1-216-097-00	METAL CHIP	100K	5%	1/10W	R976	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R477	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	R981	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R561	1-216-033-00	METAL CHIP	220	5%	1/10W	R982	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R562	1-216-081-00	METAL CHIP	22K	5%	1/10W	R983	1-216-077-00	METAL CHIP	15K	5%	1/10W
R901	1-216-097-00	METAL CHIP	100K	5%	1/10W	R984	1-216-089-00	METAL CHIP	47K	5%	1/10W
R902	1-216-097-00	METAL CHIP	100K	5%	1/10W	R985	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R903	1-216-097-00	METAL CHIP	100K	5%	1/10W	R986	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R904	1-216-097-00	METAL CHIP	100K	5%	1/10W	R987	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R905	1-216-097-00	METAL CHIP	100K	5%	1/10W	R988	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R906	1-216-097-00	METAL CHIP	100K	5%	1/10W	R991	1-216-077-00	METAL CHIP	15K	5%	1/10W
R907	1-216-097-00	METAL CHIP	100K	5%	1/10W	R992	1-216-089-00	METAL CHIP	47K	5%	1/10W
R908	1-216-097-00	METAL CHIP	100K	5%	1/10W	R993	1-216-051-00	METAL CHIP	1.2K	5%	1/10W

PANEL REEL MOTOR TRANSLATION

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R994	1-216-055-00	METAL CHIP 1.8K 5% 1/10W		S976	1-554-303-21	SWITCH, TACTILE (AUTO CAL, 9 DECK-B)	
R995	1-216-059-00	METAL CHIP 2.7K 5% 1/10W		S977	1-554-303-21	SWITCH, TACTILE (DOLBY NR, 6 DECK-B)	
R996	1-216-063-00	METAL CHIP 3.9K 5% 1/10W		S978	1-554-303-21	SWITCH, TACTILE (AUTO PAUSE, 3)	
R997	1-216-063-00	METAL CHIP 3.9K 5% 1/10W		S979	1-571-452-11	SWITCH, SLIDE (TIMER)	
R998	1-216-069-00	METAL CHIP 6.8K 5% 1/10W		S983	1-554-303-21	SWITCH, TACTILE (RMS DISPLAY)	
R1031	1-216-001-00	METAL CHIP 10 5% 1/10W (US, CND)		S984	1-554-303-21	SWITCH, TACTILE (RMS/START)	
R1032	1-216-073-00	METAL CHIP 10K 5% 1/10W (US, CND)		S985	1-554-303-21	SWITCH, TACTILE (RMS CHECK)	
R1033	1-216-073-00	METAL CHIP 10K 5% 1/10W (US, CND)		S986	1-554-303-21	SWITCH, TACTILE (RMS SET)	
R1034	1-216-025-91	METAL GLAZE 100 5% 1/10W (US, CND)		S987	1-554-303-21	SWITCH, TACTILE (PHONE LEVEL -)	
R1035	1-216-073-00	METAL CHIP 10K 5% 1/10W (US, CND)		S988	1-554-303-21	SWITCH, TACTILE (PHONE LEVEL +)	
R1036	1-216-073-00	METAL CHIP 10K 5% 1/10W (US, CND)		S989	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE △ DECK-B)	
< VARIABLE RESISTOR >				S990	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE △ DECK-A)	
RV71	1-223-893-11	RES, VAR 10K/10K (DUBBING LEVEL)		< FLUORESCENT INDICATOR >			
RV561	1-223-867-11	RES, VAR, CARBON 50K/50K (REC LEVEL)		VFD901	1-517-415-11	INDICATOR TUBE, FLUORESCENT	
RV562	1-223-892-11	RES, VAR 50K/50K (BALANCE)		< VIBRATOR >			
RV901	1-223-868-11	RES, VAR 10K (TAPE SPEED)		X901	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
< SWITCH >				*****			
S901	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)		1-632-741-21	REEL MOTOR BOARD		
S931	1-554-303-21	SWITCH, TACTILE (REC MUTE ● DECK-A)		*****			
S932	1-554-303-21	SWITCH, TACTILE (REC ● DECK-A)		< CAPACITOR >			
S933	1-554-303-21	SWITCH, TACTILE (AMS ►► DECK-A)		C1051	1-124-907-11	ELECT 10uF 20% 50V	
S934	1-554-303-21	SWITCH, TACTILE (AMS ◄◄ DECK-A)		C1052	1-124-907-11	ELECT 10uF 20% 50V	
S935	1-554-303-21	SWITCH, TACTILE (PAUSE ■■ DECK-A)		C1053	1-164-159-11	CERAMIC 0.1uF 50V	
S936	1-554-303-21	SWITCH, TACTILE (BACK ◄ DECK-A)		< CONNECTOR >			
S937	1-554-303-21	SWITCH, TACTILE (FRONT ► DECK-A)		* CN1051	1-568-947-11	PIN, CONNECTOR 9P	
S938	1-554-303-21	SWITCH, TACTILE (CLEAR ■ DECK-A)		* CN1052	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	
S941	1-554-303-21	SWITCH, TACTILE (REC MUTE ● DECK-B)		* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
S942	1-554-303-21	SWITCH, TACTILE (REC ● DECK-B)		< MOTOR >			
S943	1-554-303-21	SWITCH, TACTILE (AMS ►► DECK-B)		M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
S944	1-554-303-21	SWITCH, TACTILE (AMS ◄◄ DECK-B)		M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
S945	1-554-303-21	SWITCH, TACTILE (PAUSE ■■ DECK-B)		< RESISTOR >			
S946	1-554-303-21	SWITCH, TACTILE (◄ DECK-B)		R1051	1-247-825-31	CARBON 560 5% 1/4W	
S947	1-554-303-21	SWITCH, TACTILE (► DECK-B)		*****			
S948	1-554-303-21	SWITCH, TACTILE (■ DECK-B)		* 1-634-323-11	TRANSLATION BOARD		
S961	1-554-303-21	SWITCH, TACTILE (COUNTER RESET DECK-A)		*****			
S962	1-554-303-21	SWITCH, TACTILE (COUNTER MEMORY DECK-A)		< CONNECTOR >			
S963	1-554-303-21	SWITCH, TACTILE (PITCH CONTROL ON/OFF, 1)		* CN1091	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P	
S964	1-554-303-21	SWITCH, TACTILE (MPX FILTER, 4)		* CN1092	1-564-509-11	PLUG, CONNECTOR 6P	
S965	1-554-303-21	SWITCH, TACTILE (DIR MODE, 7)		* CN1093	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
S966	1-554-303-21	SWITCH, TACTILE (AUTO CAL, 8 DECK-A)		CN1094	1-564-506-11	PLUG, CONNECTOR 3P	
S967	1-554-303-21	SWITCH, TACTILE (DOLBY NR, 5 DECK-A)					
S968	1-554-303-21	SWITCH, TACTILE (BLANK SKIP, 2)					
S971	1-554-303-21	SWITCH, TACTILE (COUNTER RESET DECK-B)					
S972	1-554-303-21	SWITCH, TACTILE (COUNTER MEMORY DECK-B)					
S973	1-554-303-21	SWITCH, TACTILE (SYNCHRO DUBBING NORMAL)					
S974	1-554-303-21	SWITCH, TACTILE (SYNCHRO DUBBING HIGH, >10)					
S975	1-554-303-21	SWITCH, TACTILE (A+B REC, 10)					

Ref.No.	Part No.	Description	Remark

		MISCELLANEOUS	

64	1-575-674-11	WIRE, FLAT TYPE (8 CORE)	
73	1-575-663-31	WIRE, FLAT TYPE (5 CORE)	
△105	1-551-188-XX	CORD, POWER (E)	
△105	1-590-836-11	CORD, POWER (US, CND)	
△105	1-696-845-11	CORD, POWER (AUS)	
△106	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
* CNJ1	1-558-350-21	CORD (WITH CONNECTOR) (CONTROL S IN)	(US, CND)
D1001	8-719-980-85	DIODE SLF-325C	
D1091	8-719-950-74	LED SLR314D-B	
ECP1	1-765-469-11	LEAD (WITH CONNECTOR)	
HRPE1001A-2003-722-A		DECK ASSY, HEAD (REC/PB/ERASE)	
IC1001	8-749-920-97	PHOTO REFLECTOR GP2S22B	
IC1002	8-749-920-97	PHOTO REFLECTOR GP2S22B	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-605-1	MOTOR (CAPSTAN R) ASSY	
Q1091	8-729-809-43	TRANSISTOR SPS-314B-BE	
RV561	1-223-867-11	RES, VAR, CARBON 50K/50K	
△S901	1-570-307-11	SELECTOR, POWER VOLTAGE (E)	
S1001	1-466-525-11	ENCODER, ROTARY	
△T1	1-427-923-11	TRANSFORMER, POWER (AUS)	
△T1	1-427-924-11	TRANSFORMER, POWER (US, CND)	
△T1	1-427-925-11	TRANSFORMER, POWER (E)	
VFD901	1-517-415-11	INDICATOR TUBE, FLUORESCENT	

		ACCESSORIES & PACKING MATERIALS	

	1-465-738-11	REMOTE COMMANDER (RM-J903) (E, AUS)	
	1-558-271-11	CORD, CONNECTION (AUDIO 108cm)	
	2-181-754-01	COVER, BATTERY (for RM-J903) (E, AUS)	
*	3-354-913-01	CUSHION	
	3-798-768-11	MANUAL, INSTRUCTION	
		(ENGLISH, FRENCH, SPANISH) (CND, E)	
	3-798-768-21	MANUAL, INSTRUCTION (ENGLISH) (US, AUS)	
*	3-925-711-01	INDIVIDUAL CARTON	

Ref.No.	Part No.	Description	Remark

		HARDWARE LIST	

#1	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
#2	7-685-870-01	SCREW +BVTT 3X5 (S)	
#3	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
#4	7-685-871-01	SCREW +BVTT 3X6 (S)	
#5	7-682-548-09	SCREW +BVTT 3X8 (S)	
#6	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#7	7-682-548-04	SCREW +BVTT 3X8 (S)	
#8	7-621-255-20	SCREW +BVTT 2X4 (S)	
#9	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
#10	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
#11	7-621-255-35	SCREW +BVTT 2X5 (S)	
#12	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#13	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

TC-WA9ES

SONY SERVICE MANUAL

US Model
Canadian Model
E Model
Australian Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject : 1. CORRECTION
2. RM SENSOR BOARD AND PANEL BOARD
CHANGED
3. OTHER CHANGES























(RPC-96006/ECN-TC500422)

1. CORRECTION

- Correct your service manual as shown below.

GENERAL

 : Indicates corrected portion

Page	INCORRECT	CORRECT
3	 1/PITCH CONTROL (Tape speed)	 PITCH CONTROL (Tape speed)
	 4/TIMER switch	 TIMER switch
	 7/PITCH CONTROL ON/OFF (Tape speed) button	 1/PITCH CONTROL ON/OFF (Tape speed) button
	 2/MPX (multiplex) FILTER ON/OFF button	 4/MPX (multiplex) FILTER ON/OFF button
	 5/DIR (direction) MODE switch	 7/DIR (direction) MODE switch
	 BLANK SKIP button	 2/BLANK SKIP button
	 9 DOLBY NR (Dolby noise reduction) buttons (deck A) ON/OFF button B/C/S button	 5/DOLBY NR (Dolby noise reduction) buttons (deck A) OFF/B/C/S button
	 12 6/DOLBY NR (Dolby noise reduction) buttons (deck B) ON/OFF button B/C/S button	 12 6/DOLBY NR (Dolby noise reduction) buttons (deck B) OFF/B/C/S button
	 13 AUTO PAUSE button	 13 3/AUTO PAUSE button
	 14 A+B REC (simultaneous recording) button	 14 10/A+B REC (simultaneous recording) button
	 15 SYNCHRO DUBBING buttons HIGH Speed button NORMAL Speed button	 15 >10/SYNCHRO DUBBING buttons HIGH Speed button NORMAL Speed button

SCHEMATIC DIAGRAM

✖ : Indicates corrected portion

Page	INCORRECT	CORRECT
30	<p>[RM SENROR BOARD] [PANEL BOARD] Location: C-E, 5-6</p> <p>[PANEL BOARD]</p>	<p>[RM SENROR BOARD] [PANEL BOARD] Location: C-E, 5-6</p> <p>[PANEL BOARD]</p>

PRINTED WIRING BOARD

✖ : Indicates corrected portion

Page	INCORRECT	CORRECT
36	<p>[RM SENROR BOARD] [PANEL BOARD] Location: C-D, 8-10</p> <p>[PANEL BOARD]</p>	<p>[RM SENROR BOARD] [PANEL BOARD] Location: C-D, 8-10</p> <p>[PANEL BOARD]</p>

EXPLODED VIEWS

Page	INCORRECT				CORRECT			
	Ref. No	Part No	Description	Remark	Ref. No	Part No	Description	Remark
42	69	9-911-844-XX	CUSHION		* 69	3-354-927-21	CUSHION	
45	202	X-3356-642-1	FLYWHEEL (R FWD) ASSY		202	X-3356-643-1	FLYWHEEL (R REV) ASSY	
	203	X-3356-643-1	FLYWHEEL (R REV) ASSY		203	X-3356-642-1	FLYWHEEL (R FWD) ASSY	

2. RM SENSOR BOARD and PANEL BOARD CHANGED

The RM SENSOR board has been changed due to improvements made in the remote control light-receiving circuit, and consequently, the panel board has also been changed.

The former type and new type RM SENSOR boards are not interchangeable.

The PANEL board connected to this board is also not interchangeable between the old and new types.

For details of the interchangeabilities of the PANEL board and RM SENSOR board, refer to the following table.

		PANEL board		
		FORMER TYPE (board suffix number: 11)	NEW TYPE (board suffix number: 12)	
			For former IC	For new IC
RM SENSOR Board	FORMER TYPE (IC902: GPU90XB)	○	○ * Note 1	×
	NEW TYPE (IC902: SBX1780-51)	×	×	○ * Note 1

* Note 1:

The RM SENSOR board has two kinds of type such as old type (board suffix number: 11) and new type (board suffix number: 12) according to using parts to IC902.

The new type PANEL board (board suffix number: 12) can be made to correspond to the former type and new type RM SENSOR boards by changing the mounted parts to the board.

Check if the RM SENSOR board used is the old or new type and use the corresponding PANEL board.

CORRESPONDENCE OF NEW AND OLD RM SENSOR BOARDS

- Use the former type RM SENSOR board only for the former type PANEL board (board suffix number: 11).
(The new type RM SENSOR board cannot be used because of modifications of the connection of the connector.)
- The new type PANEL board (board suffix number: 12) can correspond to the former and new type RM SENSOR boards by changing a part of circuit.
However, the connection of the connector is not interchangeable between the PANEL and RM SENSOR boards.
Refer to the following table and perform the necessary repairs.

Difference between Former and New PANEL and RM SENSOR Boards

: Indicates changed portion

Page	FORMER Type (RM SENSOR BOARD suffix No. -11)	NEW Type (RM SENSOR BOARD suffix No. -12)
31	<p>[RM SENSOR BOARD] [PANEL BOARD] Location: D-E, 5-6</p>	

Page	FORMER Type (RM SENSOR BOARD suffix No. -11)	NEW Type (RM SENSOR BOARD suffix No. -12)																																
36	<p>[PANEL BOARD] Location: B-D, 7-9</p> <p>1-656-410-12(B)</p> <p>1-656-410-11(N)</p> <p>[RM SENSOR BOARD] Location: C-D, 9-10</p>	<p>1-656-410-12(B)</p> <p>1-656-410-12(N)</p>																																
55	<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td colspan="4">*** PANEL BOARD ***</td></tr><tr><td>C904</td><td></td><td>NO MOUNT</td><td></td></tr><tr><td>* CN905</td><td>1-691-007-11</td><td>CONNECTOR, PC BOARD (PLUG) 4P</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	*** PANEL BOARD ***				C904		NO MOUNT		* CN905	1-691-007-11	CONNECTOR, PC BOARD (PLUG) 4P		<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td colspan="4">*** PANEL BOARD ***</td></tr><tr><td>C904</td><td>1-124-589-11</td><td>ELECT 47uF 20% 16V</td><td></td></tr><tr><td>* CN905</td><td>1-573-107-11</td><td>CONNECTOR, PC BOARD (PLUG) 4P</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	*** PANEL BOARD ***				C904	1-124-589-11	ELECT 47uF 20% 16V		* CN905	1-573-107-11	CONNECTOR, PC BOARD (PLUG) 4P	
Ref.No	Part No	Description	Remark																															
*** PANEL BOARD ***																																		
C904		NO MOUNT																																
* CN905	1-691-007-11	CONNECTOR, PC BOARD (PLUG) 4P																																
Ref.No	Part No	Description	Remark																															
*** PANEL BOARD ***																																		
C904	1-124-589-11	ELECT 47uF 20% 16V																																
* CN905	1-573-107-11	CONNECTOR, PC BOARD (PLUG) 4P																																
56	<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td>IC902</td><td>8-749-923-80</td><td>IC GP1U90XB</td><td></td></tr><tr><td>JW140</td><td></td><td>NO MOUNT</td><td></td></tr><tr><td>JW141</td><td></td><td>JUMPER WIRE</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	IC902	8-749-923-80	IC GP1U90XB		JW140		NO MOUNT		JW141		JUMPER WIRE		<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td>IC902</td><td>8-741-780-51</td><td>IC SBX1780-51</td><td></td></tr><tr><td>JW140</td><td></td><td>JUMPER WIRE</td><td></td></tr><tr><td>JW141</td><td></td><td>NO MOUNT</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	IC902	8-741-780-51	IC SBX1780-51		JW140		JUMPER WIRE		JW141		NO MOUNT	
Ref.No	Part No	Description	Remark																															
IC902	8-749-923-80	IC GP1U90XB																																
JW140		NO MOUNT																																
JW141		JUMPER WIRE																																
Ref.No	Part No	Description	Remark																															
IC902	8-741-780-51	IC SBX1780-51																																
JW140		JUMPER WIRE																																
JW141		NO MOUNT																																
57	<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td>R922</td><td>1-216-025-91</td><td>METAL GLAZE 100 5% 1/10W</td><td>(Note 2)</td></tr><tr><td>R977</td><td></td><td>NO MOUNT</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	R922	1-216-025-91	METAL GLAZE 100 5% 1/10W	(Note 2)	R977		NO MOUNT		<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td>R922</td><td>1-216-025-91</td><td>METAL GLAZE 100 5% 1/10W</td><td>(Note 2)</td></tr><tr><td>R977</td><td>1-216-017-91</td><td>METAL GLAZE 47 5% 1/10W</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	R922	1-216-025-91	METAL GLAZE 100 5% 1/10W	(Note 2)	R977	1-216-017-91	METAL GLAZE 47 5% 1/10W									
Ref.No	Part No	Description	Remark																															
R922	1-216-025-91	METAL GLAZE 100 5% 1/10W	(Note 2)																															
R977		NO MOUNT																																
Ref.No	Part No	Description	Remark																															
R922	1-216-025-91	METAL GLAZE 100 5% 1/10W	(Note 2)																															
R977	1-216-017-91	METAL GLAZE 47 5% 1/10W																																

Note 2:

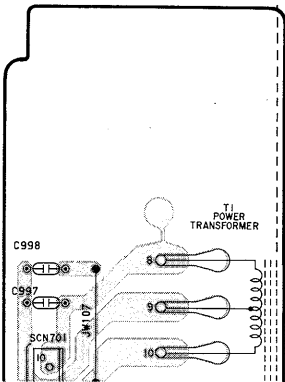
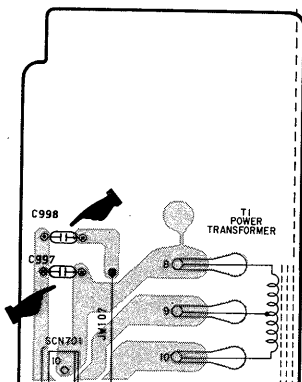
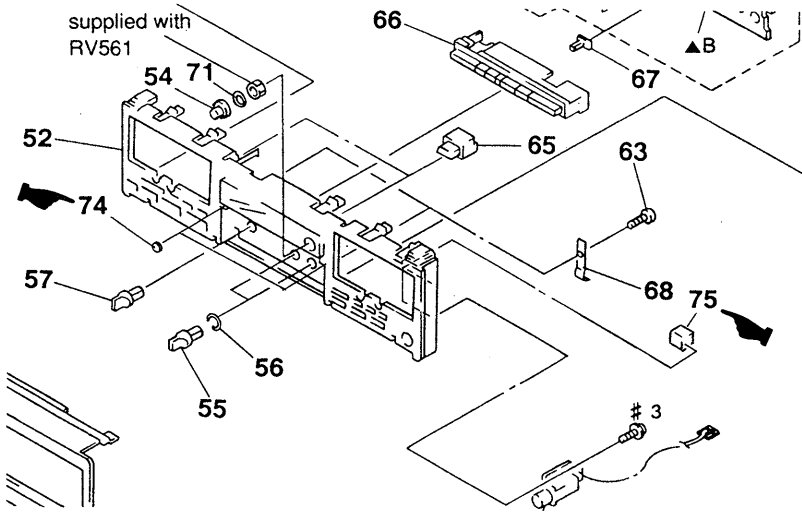
Mount the former type R922 to the PANEL board and new type to the RM SENSOR board.

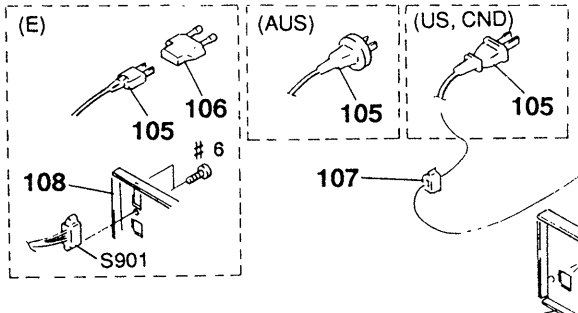
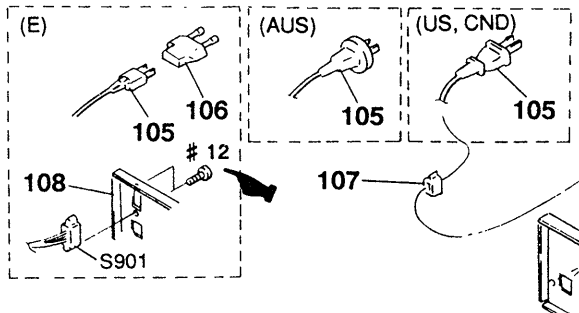
3. OTHER CHANGES

 : Indicates changed portion

NOTE:

- Abbreviation
- CND : Canadian model
- AUS : Australian model

Page	FORMER	NEW																																				
23	<div><div>[POWER TRANSFORMER BOARD]</div><div>Location: B-D, 21-22</div><div></div><div>1-656-410-11(I)</div></div>	<div></div> <div>1-656-410-12(I)</div>																																				
41	<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td colspan="4">*** EXPLODED VIEWS ***</td></tr><tr><td>3</td><td>3-923-143-01</td><td>PLATE, ORNAMENTAL</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	*** EXPLODED VIEWS ***				3	3-923-143-01	PLATE, ORNAMENTAL		<table><tr><th>Ref.No</th><th>Part No</th><th>Description</th><th>Remark</th></tr><tr><td colspan="4">*** EXPLODED VIEWS ***</td></tr><tr><td>3</td><td>3-923-143-01</td><td>PLATE, ORNAMENTAL (E, AUS)</td><td></td></tr><tr><td>3</td><td>3-923-143-21</td><td>PLATE, ORNAMENTAL (US, CND)</td><td></td></tr></table>	Ref.No	Part No	Description	Remark	*** EXPLODED VIEWS ***				3	3-923-143-01	PLATE, ORNAMENTAL (E, AUS)		3	3-923-143-21	PLATE, ORNAMENTAL (US, CND)									
Ref.No	Part No	Description	Remark																																			
*** EXPLODED VIEWS ***																																						
3	3-923-143-01	PLATE, ORNAMENTAL																																				
Ref.No	Part No	Description	Remark																																			
*** EXPLODED VIEWS ***																																						
3	3-923-143-01	PLATE, ORNAMENTAL (E, AUS)																																				
3	3-923-143-21	PLATE, ORNAMENTAL (US, CND)																																				
42	<table><tr><td>* 58</td><td>3-350-846-21</td><td>HOLDER, PCB (US, CND)</td><td></td></tr><tr><td>66</td><td>3-923-146-01</td><td>BUTTON (COUNTER)</td><td></td></tr><tr><td>* 72</td><td>3-704-198-11</td><td>SUPPORT, PC (US, CND)</td><td></td></tr></table>	* 58	3-350-846-21	HOLDER, PCB (US, CND)		66	3-923-146-01	BUTTON (COUNTER)		* 72	3-704-198-11	SUPPORT, PC (US, CND)		<table><tr><td>* 58</td><td>3-682-419-11</td><td>HOLDER, PCB (US, CND)</td><td></td></tr><tr><td>66</td><td>3-923-146-01</td><td>BUTTON (COUNTER) (US, CND)</td><td></td></tr><tr><td>66</td><td>3-923-146-11</td><td>BUTTON (COUNTER) (E, AUS)</td><td></td></tr><tr><td>* 72</td><td>3-704-198-01</td><td>SUPPORT, PC (US, CND)</td><td></td></tr><tr><td>74</td><td>2-538-217-01</td><td>CUSHION</td><td></td></tr><tr><td>75</td><td>9-911-841-99</td><td>CUSHION</td><td></td></tr></table>	* 58	3-682-419-11	HOLDER, PCB (US, CND)		66	3-923-146-01	BUTTON (COUNTER) (US, CND)		66	3-923-146-11	BUTTON (COUNTER) (E, AUS)		* 72	3-704-198-01	SUPPORT, PC (US, CND)		74	2-538-217-01	CUSHION		75	9-911-841-99	CUSHION	
* 58	3-350-846-21	HOLDER, PCB (US, CND)																																				
66	3-923-146-01	BUTTON (COUNTER)																																				
* 72	3-704-198-11	SUPPORT, PC (US, CND)																																				
* 58	3-682-419-11	HOLDER, PCB (US, CND)																																				
66	3-923-146-01	BUTTON (COUNTER) (US, CND)																																				
66	3-923-146-11	BUTTON (COUNTER) (E, AUS)																																				
* 72	3-704-198-01	SUPPORT, PC (US, CND)																																				
74	2-538-217-01	CUSHION																																				
75	9-911-841-99	CUSHION																																				
<div><div>supplied with RV561</div><div></div></div>																																						

Page	FORMER						NEW					
	Ref. No	Part No	Description	Remark			Ref. No	Part No	Description	Remark		
43	ECP1 △S901	1-765-469-11 1-570-307-11	LEAD (WITH CONNECTOR) SELECTOR, POWER VOLTAGE (E)				ECP1 △S901	1-775-756-11 1-692-155-11	LEAD (WITH CONNECTOR) SELECTOR, POWER VOLTAGE (E)			
												
46	*** ELECTRICAL PARTS LIST *** *** DOLBY (S) BOARD ***						*** ELECTRICAL PARTS LIST *** *** DOLBY (S) BOARD ***					
	R2	1-208-806-11	METAL GLAZE	10K	2%	1/10W	R2	1-208-462-41	METAL GLAZE	10K	2%	1/10W
	R8	1-216-667-11	METAL GLAZE	4.7K	0.5%	1/10W	R8	1-208-453-41	METAL GLAZE	4.7K	2%	1/10W
	R14	1-216-667-11	METAL GLAZE	4.7K	0.5%	1/10W	R14	1-208-453-41	METAL GLAZE	4.7K	2%	1/10W
47	R25	1-208-806-11	METAL GLAZE	10K	2%	1/10W	R25	1-208-462-41	METAL GLAZE	10K	2%	1/10W
47	*** MAIN BOARD ***						*** MAIN BOARD ***					
	C191	1-124-925-11	ELECT	2.2uF	20%	100V	C191	1-126-961-11	ELECT	2.2uF	20%	50V
	C291	1-124-925-11	ELECT	2.2uF	20%	100V	C291	1-126-961-11	ELECT	2.2uF	20%	50V
	C521	1-124-925-11	ELECT	2.2uF	20%	100V	C521	1-126-961-11	ELECT	2.2uF	20%	50V
48	C541	1-124-925-11	ELECT	2.2uF	20%	100V	C541	1-126-961-11	ELECT	2.2uF	20%	50V
	C581	1-124-925-11	ELECT	2.2uF	20%	100V	C581	1-126-961-11	ELECT	2.2uF	20%	50V
	C586	1-124-925-11	ELECT	2.2uF	20%	100V	C586	1-126-961-11	ELECT	2.2uF	20%	50V
	C587	1-124-925-11	ELECT	2.2uF	20%	100V	C587	1-126-961-11	ELECT	2.2uF	20%	50V
	C803	1-124-925-11	ELECT	2.2uF	20%	100V	C803	1-126-961-11	ELECT	2.2uF	20%	50V
	CP521	1-232-946-11	COMPOSITION CIRCUIT BLOCK			CP521	1-233-562-11	COMPOSITION CIRCUIT BLOCK				
	CP541	1-232-946-11	COMPOSITION CIRCUIT BLOCK			CP541	1-233-562-11	COMPOSITION CIRCUIT BLOCK				
49	IC601	8-752-072-16	IC CXA1598M-T6			IC601	8-752-070-68	IC CXA1598M				
	IC602	8-752-072-16	IC CXA1598M-T6			IC602	8-752-070-68	IC CXA1598M				
	IC801	8-759-337-49	IC uPD78043AGF-023-3B9			IC801	8-759-356-94	IC uPD78043AGF-028-3B9				
	Q528	8-729-142-46	TRANSISTOR 2SC2001-LK			Q528	8-729-194-57	TRANSISTOR 2SC945-P				
	Q529	8-729-142-46	TRANSISTOR 2SC2001-LK			Q529	8-729-194-57	TRANSISTOR 2SC945-P				
50	Q548	8-729-142-46	TRANSISTOR 2SC2001-LK			Q548	8-729-194-57	TRANSISTOR 2SC945-P				
	Q549	8-729-142-46	TRANSISTOR 2SC2001-LK			Q549	8-729-194-57	TRANSISTOR 2SC945-P				
52	R762	1-249-423-11	CARBON	3.3K	5%	1/4W F	R762	1-247-843-11	CARBON	3.3K	5%	1/4W
	R786	1-249-423-11	CARBON	3.3K	5%	1/4W F	R786	1-247-843-11	CARBON	3.3K	5%	1/4W

Page	FORMER						NEW					
	Ref. No	Part No	Description	Remark			Ref. No	Part No	Description	Remark		
46	*** PANEL BOARD ***						*** PANEL BOARD ***					
	9-911-844-XX CUSHION						*	3-354-927-21 CUSHION				
47	C380	1-124-916-11	ELECT	22uF	20%	63V	C380	1-126-965-11	ELECT	22uF	20%	50V
	C390	1-124-916-11	ELECT	22uF	20%	63V	C390	1-126-965-11	ELECT	22uF	20%	50V
	C480	1-124-916-11	ELECT	22uF	20%	63V	C480	1-126-965-11	ELECT	22uF	20%	50V
	C490	1-124-916-11	ELECT	22uF	20%	63V	C490	1-126-965-11	ELECT	22uF	20%	50V
54	ECP1	1-765-469-11	LEAD (WITH CONNECTOR)				ECP1	1-775-756-11	LEAD (WITH CONNECTOR)			
	Q51	8-729-107-43	TRANSISTOR	2SC3624-L18			Q51	8-729-107-46	TRANSISTOR	2SC3624A-L15		
	Q52	8-729-107-43	TRANSISTOR	2SC3624-L18			Q52	8-729-107-46	TRANSISTOR	2SC3624A-L15		
	Q111	8-729-107-43	TRANSISTOR	2SC3624-L18			Q111	8-729-107-46	TRANSISTOR	2SC3624A-L15		
	Q211	8-729-107-43	TRANSISTOR	2SC3624-L18			Q211	8-729-107-46	TRANSISTOR	2SC3624A-L15		
55	*** MISCELLANEOUS ***						*** MISCELLANEOUS ***					
	ECP1	1-765-469-11	LEAD (WITH CONNECTOR)				ECP1	1-775-756-11	LEAD (WITH CONNECTOR)			
	△S901	1-570-307-11	SELECTOR, POWER VOLTAGE (E)				△S901	1-692-155-11	SELECTOR, POWER VOLTAGE (E)			

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.